FEEDSTUFFS

The Weekly Newspaper for the Feed Industry

Volume 33—Number 39 | SEPTEMBER 30, 1961 | 1 Year $5, 2 Years $8

'Yes' and 'No' Answers Found for Question On Turkey Cutbacks

By FRED E. TUNKS
Feedstuffs Staff

Have this year's record low prices really scared the turkey industry enough for its component businesses to think that a substantial cutback in production is necessary for survival? Statistics indicate that the answer is "No." But some comments gathered from the trade this week say "Yes."

It seems strange, considering the current plight of the industry brought

(Turn to TURKEYS, page 100)

Dehydrated Alfalfa Price Advanced $2 Following Cold Wave

KANSAS CITY—A $2 advance in the price of dehydrated alfalfa was announced by larger producers to become effective Oct. 1, following a cold wave over much of the principal alfalfa territory this week, heralding the end of the growing season.

Frost at several points in Nebras-

(Turn to DEHY, page 8)

Hog Feed Business Is Expected to Stay Good for Some Time

Hog production should provide a profitable outlet for manufactured feeds for some time to come.

Even thought the hog-corn price ratio was at a very favorable 16 to 1 this summer, the current hog cycle is showing an unusually slow buildup—hog farrowings are expected to increase moderately during the 1961 fall

(Turn to HOG FEED, page 8)

USDA Takes Action to Bull Soybean Market

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—The U.S. Department of Agriculture moved swiftly this week to initiate action on its foreign donation program for edible oil—principally soy oil—when it announced officially that it would buy 400 million pounds of oil for this program.

The program is in line with the bullish urge at USDA to return to farmers the support price for soybeans.

As noted previously, the big soybean crop and the oil export efforts this year could hold soybean meal prices at levels considerably lower than last year.

Regarding the oil program — the

(Turn to BULL, page 101)

QUESTION BULLISHNESS

WASHINGTON — Seasoned trade observers here this week told Feedstuffs that notwithstanding the determined USDA plan to boost soybean prices to support levels at peak of harvest, there is nothing in the market to indicate any bargain in bean oil prices at present levels. They doubt that bean oil can move substantially higher on the prospective purchase of the 200 million pounds of oil for foreign donation.

The observers say that nothing less than a 400-million-pound program timed to meet the market after processors have accumulated about 75-100 million bushels from the new crop can do the bullish job USDA contemplates. They also comment that the present market for beans is 12-15¢ below the loan level, and they say the only way the loan level can be assured to the farmer would be a huge into-loan movement at the time of harvest peak.

Minority Would Accept Marketing Orders

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON — A meeting here this week of the American Feed Manufacturers Assn. board of directors revealed that there are some manufacturers who might welcome use of marketing orders and agreements in the poultry industry.

Information obtained following the meeting disclosed what has been believed—that there is a minority but influential number of feed manufacturers who are now reconciled to the likelihood that possibly the best interests of the feed industry may be consistent with proposals for broad use of marketing orders for the poultry and turkey industries.

However, a majority apparently would be opposed to control programs.

(Turn to MINORITY, page 97)

Week Closes Lower On Broiler Prices

Following a spurt of strength earlier in the week, broiler prices Sept. 29 in both the Southeast and Delmarva were down ¾-1¢.

The U.S. Department of Agriculture reported that Georgia prices were mostly 11¢ as the week ended, a drop of as much as 2¢ from earlier readings of the week. Prices had climbed to 12½-13¼¢ in Georgia and some growers said they could break even at this price level because of lower feed ingredient prices.

In Delmarva, prices advanced sharply early in the week, but supplies, even though light, proved more than ample for processing requirements and pushed values down.

With lower prices, USDA noted resistance on the part of sellers in some markets.

Broiler Picture in Better Focus; USDA Rejects Breeder Hen Buying

By ROBERT H. BROWN
Feedstuffs Special Correspondent

ATLANTA—The broiler picture in the South, price-wise and production-wise, seems to be coming in better focus now that all the excitement of meeting after meeting has settled. Noticeably, no special solution has been found in spite of all the meetings and divergent opinions existed this week as to what may happen in the next few weeks.

The Department of Agriculture this week predicted this year's upturn in production and marketings should end in November. A reflection in cutbacks in egg placements should be noticeable at that time, the USDA said.

No Breeder Buying

The industry received a setback in plans to relieve the production lines when USDA announced it had turned down Sen. Herman Talmadge's plan to buy breeder hens.

The announcement, coming on Wednesday of this week, said Sen. Talmadge's plan would be ineffective in reducing production.

Sen. Talmadge's plan involved the

(Turn to BROILERS, page 97)

FEEDSTUFFS *Features This Week*

PARAKERATOSIS—A report of experimental work on the swine disease parakeratosis appears on **page 26.**

NEW MILL UPS BUSINESS—An Iowa firm reports that its $200,000 push-button mill has helped to step up business volume. **Page 38.**

QUALITY EGGS—A Wisconsin firm has an egg program involving construction of 50 layer houses. **Page 82.**

—REGULAR FEATURES—

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'Nutrition Program' For Strong Dealers Given at Conference

By RUSSELL TOKHEIM
Feedstuffs Staff

AMES, IOWA—A seven-point "nutrition program" for strong feed dealers was presented at the Iowa Feed Conference held here.

Pointing out the seven "nutrients" for strong dealers was William E. Schafenecker, general sales manager and vice president of Kent Feeds, Inc., Muscatine, Iowa, in a talk entitled "What's in a Bag of Feed?"

More than 300 persons registered for the conference held on the campus of Iowa State University Sept. 22 and 23. Sponsors of the meeting were: Iowa State University, West-

(Turn to DEALERS, page 97)

Farm Policy in the Feed Hopper

By DR. W. LYLE FITZGERALD
The Quaker Oats Co.

Businesses serving agriculture in the future face more and more federal laws that will significantly change the structure of farm markets and their business methods.

Free markets are going to be difficult to achieve or maintain for most food products in the next decade. While free markets are not in sight, there will always be a tendency to approach the conditions demanded by a free inner play of market prices.

(Turn to FARM POLICY, page 8)

EDITOR'S NOTE: *Of major importance to all in the feed and allied industries are recent and prospective developments in government farm programs and controls. A concise analysis of the present and possible future situation in farm policy as it affects the feed industry is presented in the accompanying article by Dr. W. Lyle Fitzgerald, manager of economic research for The Quaker Oats Co., Chicago. Dr. Fitzgerald discusses specifically the corn price support increase and the feed grain program; the increase in soybean price supports; enabling legislation permitting marketing orders for turkeys—and their current or prospective effects on ingedient and feed prices and animal agriculture and the feed business. Included are comments on possible developments and problems in any supply control programs. This article is from a talk at the Vermont Feed Dealers & Manufacturers Assn. meeting this week in Burlington, Vt.*

Purina Board Votes 2 for 1 Stock Split

ST. LOUIS—A two for one stock split has been approved by the board of directors of the Ralston Purina Co., St. Louis. The announcement was made by Donald Danforth, president, following a recent directors meeting.

Mr. Danforth also announced that the directors had declared a regular quarterly dividend of 35¢ a share, pay-

(Turn to PURINA, page 8)

FEEDSTUFFS®

The Weekly Newspaper for the Feed Industry

Published by THE MILLER PUBLISHING CO.

2501 Wayzata Blvd., Minneapolis, Minn.

Address Mail to: Box 67, Minneapolis 40, Minn.

Telephone FRanklin 4-5200 - All Offices Serviced by Bell System Teletype

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Correspondence regarding subscriptions, changes of address, etc., should be sent to Circulation Manager, Feedstuffs, Box 67, Minneapolis 40, Minn. Single copies 50¢. Subscription rates: One year $5, two years $8, in the U.S., U.S. possessions, Canada and Pan-America. Add $3 a year for postage to other countries. Readers are urged to give prompt notice of change of address and to anticipate future changes by at least three weeks' advance notice. Ask postman for form 22-S. Feedstuffs accepts subscriptions only through its own offices; no subscription solicitors are employed or recognized. Associated publications: The Northwestern Miller, Croplife, Farm Store Merchandising, Feedlot and Professional Nursing Home. Second-class postage paid at Minneapolis, Minn.

The regional circulation of this issue is concentrated in the northeastern states

Top of the Hopper

DESPITE THE HEAVY LOSSES in the turkey industry this year because of excess production and extremely low prices, fears have been expressed that turkey production will be even larger in 1962. Some observers say that some firms which produce or finance turkeys will assume that others will drop out and will go ahead with bigger production next year in hopes of recouping losses or gaining additional profits in what they hope will be a better year.

As mentioned by the Poultry Survey Committee and others, this year's low returns or loss situations follow two generally satisfactory years, and there is evidence that ample production credit or financing will be available. While there have been reports of losses among growers and contractors, some who finance part or all of cash costs of turkey production are said to have recovered amounts covering financing from the sales of turkeys by growers.

WE'RE NOT TOO SURE of the authenticity of this story, but even if partly true it is worth pondering a bit. Frank Priebe, reporting in the Arkansas Poultry News, says he's heard of a mule dealer in the South, who hasn't been doing much business in recent years, figures he will sell 5,000 mules this year. "According to the report I read, it's due largely to the government's tobacco acreage allotment program," writes Mr. Priebe.

"In Georgia, for example, the average tobacco allotment per farm is reported to be 2½ acres. To work a small plot like that a man can't afford a tractor. So he buys a mule. In its efforts to protect the small growers it would seem that the government, in this case, is perpetuating the 40-acres-and-a-mule type of farming."

And Mr. Priebe asks: "If the poultry industry should get itself involved in some kind of control program, do we have any guarantee that it wouldn't put poultry raising back into the pin money type of business?"

WHILE SALES AND MARKETING executives mostly were boning up in a positive way on techniques to improve their scores in the selling game during the Marketing Seminar held in Chicago last week, some references to the industry's current uneasiness with the broiler situation also came up. Dean McNeal, Pillsbury executive vice president and chairman of the American Feed Manufacturers Assn., recalling his days as a running guard at Kansas State, observed that he was never hurt as much by big football opponents as he has been in recent weeks by some little 3½-lb. broilers. And Dale Smith of Western Farmers Assn., Seattle, observed that the sales executives laughed when broilers were mentioned because he suspected they were covering up the tears.

THERE HAS BEEN a lot of conversation about ways to help the broiler industry, but the best thing that could happen at the moment would be stepped up sale and consumption of chicken. And the National Broiler Council continues its efforts to do something about just that. The first Broiler Merchandising Seminar for Retailers is set for Oct. 12 at the University of Georgia. NBC processor members are urged to make all possible efforts to get retailer customers to attend the southern seminar and others to follow in other areas.

MEMO FROM A MARKET OBSERVER in Chicago, the soybean market center: "While the economic do-gooders in Washington wear out their slide

(Turn to **TOP OF THE HOPPER**, page 97)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

What appeared last week to be the start of a fall upturn in business has not developed further. But feed industry spokesmen think it will become the anticipated fall upturn within one to three weeks.

There has been a marked drop in the production of both turkey and broiler feeds. Turkeys are moving to market rapidly. Broiler feed business is down in most areas, with the important southeastern broiler growing area reporting volume of that feed now at 80% of the usual. It is also reported that some southeastern broiler growers are now breaking even on their operations.

Dairy, beef cattle and hog feeds and egg mashes are reported to be moving well through most of the nation.

Price tags are lower, with the biggest cuts on concentrates, reflecting the slide of protein ingredients.

The wholesale feedstuff price index declined 1.8 points to 77.5, which compares with 73.2 a year ago, according to the U.S. Department of Agriculture. The feed-grain index dropped 0.1 point to 63.6, which is slightly above the 62.0 of a year ago.

The hog-corn ratio, based on Chicago prices, at 16.7 was unchanged from a week ago but was still well above the 14.6 of a year ago. (Major market roundup and ingredient quotes appear on pages 98-100.)

Southwest

Formula feed business in the Southwest barely held its own as shipment of cattle feed is not heavy enough as yet to offset the reduced volume of turkey and broiler feeds.

Bookings of future cattle and dairy feeds continue on a heavy scale and an improved volume of these feeds should start moving in October.

The poor margins reflected by present prices of broilers have caused some further cutbacks in broiler flocks. This is showing its effect in current shipments of broiler feeds. The depressed turkey market has been a factor in maintaining the good volume of this line. Trade sources report that birds are being held back for lack of a market.

Some mills report that they are shipping a fair amount of cattle feed for range feeding and that the volume is more than offsetting their losses in turkey feed shipments.

Pig and hog feed sales continue to represent good volume and should increase seasonably.

Northeast

Dairy feeds dominated formula feed sales tonnage throughout this region as activity in general maintained the good turnover of the preceding week.

In the New England area there was a decided shift from poultry feeds to more egg mashes. Turkey feed demand is falling off in the western New York section as the birds are slaughtered and put into storage for the holiday trade. Broiler feed turnover in the latter area was practically nil.

Egg prices firmed up 2½¢ in New York and 2¢ in the Bay State. Broilers also gained in the New England states with a 2¢ rise in the on-the-farm price to 16¢ lb.

Running time of formula feed manufacturers averaged 40 hours from New York to the New England states.

Southeast

Formula feed business in the Southeast continues to be reported on the slow side. Broiler feed manufacturers' running time is about 80% of normal.

Broiler prices dropped ½ to 1¢ lb. this week, with sales being reported at 12½¢ to 13¼¢ lb. f.o.b. the farms. Good operators report they can come out on about a break-even basis due to lower prices for ingredients.

Pastures continue to supply good to excellent grazing throughout most of the southeastern states. The condition of cattle in general is good, and herds are holding summer weight gains well. Most supplemental feed being used is a concentrate for dairy herds.

Central States

The week witnessed little if any change in the picture with respect to formula feeds as compared with the week just preceding. For the month of September, now drawing to a close, mills in this area appeared to be fairly well satisfied with regard to the volume of business they have been doing, although they were unanimous in saying that there was room for still more.

As was the case the week before, orders were coming in just about the same volume as would be normal for this season of the year but, at the same time, the tonnage was lagging just a trifle . . . in other words, country dealers were inclined to watch their inventories a little closer.

Without question, the government's feed grain sales policy, especially with respect to corn, is of a type that makes for caution about loading up the warehouses on the theory that if the U.S. Department of Agriculture is going to continue its current policy of depressing prices of that cereal with the sole thought of enforcing punitive action against the vast number of non-compliant farmers, and with no consideration given at all to possible repercussions on the price structures of many of the feeds, there may be no need to rush in to replenish inventories of the latter until such time as, to steal a phrase from a current television program, "The Price Is Right."

Demand for hog feeds, as well as feeds for cattle, especially dairy feeds, is holding up fairly well toward normal. As expected, there has been a further let-down in call for turkey feeds.

South Central

Most feed manufacturers rated business this week as fairly good and called it a little heavier than that of the previous week. Running time is five days for most mills, with some running a few hours overtime during the week. One plant stepped up to a seven-day basis.

Hog and pig feeds continue to be the leading items. Cattle feeds are also in good demand and bookings for future delivery are going better. Feed men expect a good business in this

(Turn to **MARKETS**, page 103)

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Dr. R. A. Rasmussen—V.P., Research Director, Animal Div.—Served on faculty of 3 universities. Degrees in biochemistry and nutrition.

Dr. Myron W. Pasvogel—V. P., Dir. Research, Poultry Div.—Exper. in poultry, feed industries. Former Dir. Poultry Science Dept., U. of Ariz.

John R. Linsner—Dir. Tech. Services—Grad. U. of Ill. College of Agriculture. More than 12 years' exper. in all phases of feed formulation.

Richard W. Kerley—Coordinator of Sales, Production and Procurement. Degree in general agriculture. 12 years' experience in the feed industry.

Gerald J. Anderson—Tech. Services—M. S. degree in poultry nutrition. Was research technician at U. of Idaho and nutritionist in feed industry.

Dr. Heino Naelapaa—Coord. Spec. and Prod.—Was dir. of res. and nutr. in U.S. firms and abroad. Ph.D. nutr. and physiology, Bonn U., Germany.

Richard W. Kelley—Tech. Services—Was research asst. at U. of Mo. and at Kansas State. Master's degree in animal nutr., U. of Missouri.

Problem solving session—A Peter Hand customer (right) meets with Dr. Rasmussen for evaluation of his formulas and to discuss a palatability problem. Standing by is Harry White, Peter Hand Sales Mgr., with more than 20 years' experience in the feed and pharmaceutical fields.

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FDA Action Ends Clearance Problem with Certain Concentrates

WASHINGTON — The Food and Drug Administration has issued an order amending the certifiable antibiotic regulations which cover use of the coccidiostats amprolium and zoalene in combination with antibiotics in poultry feeds. The amendment deals with use of concentrate feeds which contain the coccidiostats and antibiotics.

Under the regulation, there are exemptions from certification if the complete medicated feed is prepared from a concentrate containing no more than 0.05% amprolium or 0.0375% zoalene.

With this action, said the American Feed Manufacturers Assn. in Chicago, the problem regarding use of the two coccidiostats in concentrate feeds is finally cleared up. Similar action had been taken previously for concentrate feeds containing the coccidiostats under other regulations, but the amendment of the antibiotic regulations also was needed.

As AFMA explained in a bulletin to members, it is now possible for concentrate manufacturers whose clearances to use these products were obtained from the antibiotic division of FDA to have the restrictive clause requiring customer (local mixer) clearance by FDA removed from these clearances. While it has been possible for some time to have this clause removed from clearances issued by the new drug branch, removal from clearances obtained by means of Antibiotic Form 10's was impossible until publication of the new amendments.

AFMA pointed out that amprolium and zoalene in the concentrates must not exceed the specified levels if there is to be exemption from clearance by FDA at the local mixer level. (These levels are specified above.) In addition, mixing directions must provide for a finished complete feed containing a recommended level of the drug. Levels in complete feeds are 0.0125 to 0.025% amprolium and 0.0063 to 0.0125% zoalene.

AFMA advised manufacturers to check all clearances for concentrates containing amprolium and zoalene to see whether they contain the restrictive clause. If they do and if the manufacturer does not now have a letter on file with FDA requesting its removal, he should write immediately to the agency. If the clause is not removed, the manufacturer will have to comply with provisions calling for shipment of the medicated concentrates only to customers who have obtained clearances from FDA. If the manufacturer ships unmedicated concentrates to mixers who may be adding amprolium or zoalene when mixing, he is urged to advise them of the necessity of obtaining FDA clearance to use these or other new drugs.

The FDA action on the problem of concentrates and use of them at the local mixer level applied only to the food additives amprolium and zoalene specifically. However, when the clarification on these products was first announced last spring, it was indicated that similar action could be taken for other products if certain safety and other information were submitted.

Reopen Plant

SAN ANGELO, TEXAS—The processing plant of Paymaster Farms, which closed operations a few weeks ago, is now operating again. Paymaster shut down all broiler operations, including the processing plant. However, the plant is being reopened by Frank Smith & Sons, poultry processors of Waco, Texas.

Manager of the plant is Archie Bomer, who had served as manager until the first owner, Marion Balch, sold his broiler interests to Paymaster about two years ago.

Jack Curtis — Tom Collins

Two at Burrus Feed Mills Get New Posts

FT. WORTH, TEXAS — The appointment of two new men to staff positions by Burrus Feed Mills, Ft. Worth, has been announced by Wesley E. Ballmann and Charles W. Harris, co-managers.

Jack D. Curtis was named director of marketing. In this capacity, he will direct and supervise the sales force for Burrus Feed Mills. Prior to the change, Mr. Curtis was a territory manager for 4½ years.

Tom Collins has assumed the position of sales promotion and advertising manager. He will direct all advertising and sales promotion activities connected with the feed mill operation. Prior to this, Mr. Collins was a territory manager for 1½ years in southwestern Texas.

Chicken Merchandising Ideas to Be Stressed At Retailer Seminar

RICHMOND, VA.—Actual case histories of successful and profitable chicken merchandising promotions will be one of many timely topics in the program contents of the first Broiler Merchandising Seminar for Retailers. Sponsored by the National Broiler Council, the first of four program seminars is set for Oct. 12 at the Center for Continuing Education on the University of Georgia Campus, Athens, Ga.

The program, planned in cooperation with a retailer advisory committee, is geared to the needs of the retailer. New ideas and materials designed specifically to sell more chicken more profitably will be featured throughout the one-day session.

A panel of two retailers and two processors sharing the platform will discuss "What I Expect from My Poultry Supplier" and "What I'd Like from My Retail Customer." A symposium of retailers will speak out on "Fresh vs. Frozen Chicken."

"A Tool Kit to Help Retailers Sell Chicken" will unveil NBC's newest merchandising aids available to retailers through their NBC processors. This advertising service for retailers was initiated this year, following an intensive cross country survey of retail executives which pointed to a great need for good chicken advertising material. The new kit is the second such advertising "package" produced especially for retailers by NBC this year.

Several other discussions of merchandising ideas and new products also are scheduled, with some of the country's leading merchandising authorities on the program.

An informal "get-acquainted" session is scheduled for 7 p.m. the evening before the seminar. The seminar will start with a breakfast at 7:30 a.m., Oct. 12.

This first retailer seminar is designed especially for retailers in the South and Southeast. The second seminar, slated for Nov. 9 in Chicago, will cover the midwestern markets. Two other similar sessions will be scheduled in the East and West.

There is no registration fee for retailers. Reservations should be made directly with the National Broiler Council, Byrd Building, Richmond 26, Va.

Linseed Company Acquired by GTA

ST. PAUL—Farmers Union Grain Terminal Assn. (GTA), St. Paul, announced this week that it has acquired the plant and all facilities of Minnesota Linseed Oil Co., Minneapolis, 93-year-old major feed ingredient processing firm which employs about 250 persons and has a production capacity of more than 100,000 tons of linseed meal annually.

Emil Loriks, Arlington, S. Dak., president of GTA, announced the acquisition at the close of a two-day board of directors meeting in St. Paul. He said the purchase does not involve any changes in operation or personnel and the company's name will be retained. E. H. Russell will continue as chairman of the board and Ray Lindquist, Jr., will remain president of Minnesota Linseed.

The amount involved in the transaction was not disclosed.

Minnesota Linseed is the second oilseed processing firm to be acquired by GTA. Honeymead Products Co., Mankato, Minn., was bought by GTA a year ago.

Statement from GTA

Mr. Loriks said Minnesota Linseed Oil Co. "has established an enviable nation-wide reputation in the field of processing and merchandising farm products." It is known as the first and oldest oilseed processing firm in the Northwest.

"We believe it is fortunate," Mr. Loriks added, "that we have been able to acquire this modern and efficient business so that it can be operated by and for farmers, as part of a carefully planned program of integrating the operations for farm families from their farms to the market place. This is what we did so successfully a year ago when the facilities of Honeymead Products Co. were acquired by farmers."

"Proud of Business"

Valentine Wurtle, major stockholder of Minnesota Linseed, said, "We are proud of the business we have built up over the decades, and the part the farmers played in the pioneering days in helping to make our business a success. So, of course, it seems quite fitting now that the same farmers on whom we depended over the years should be the ones to take over and carry on. I have every confidence that these farm people will carry on and serve the industry as efficiently in the future as we have in the past."

Broiler Egg Set Continues to Drop

SALISBURY, MD. — Broiler egg settings continued to decrease during the week ending Sept. 23 as hatcherymen in 22 reporting states set 38,848,000 eggs—a 3% decrease from the previous week and 5% below the corresponding week a year ago.

Settings were down from the previous week in 16 of the 22 states. States reporting sizeable decreases included Arkansas, Pennsylvania, California, Alabama and North Carolina.

Placements in the 22 states totaled 28,966,000 broiler chicks, 5% below the previous week but 1% above the corresponding week a year ago. Decreases were reported for 17 states compared with the previous week. Sizeable decreases were reported in Maine, Georgia, Arkansas, North Carolina and Indiana.

OREGON FIRM SOLD

PORTLAND, ORE. — Sale of the Portland Seed & Pet Supply Store to Lee Colvin has been announced by Portland Seed Co. officials. Mr. Colvin has managed the outlet since Jan. 1, 1957. Under his ownership, the store will be known as Portland Garden & Pet Store.

TESTING OF CHICKENS, TURKEYS INCREASES

WASHINGTON—Testing of chickens for supplying broiler hatching eggs was up 12% during August as compared with a year earlier, reports the U.S. Department of Agriculture. Testing of turkeys was also increased.

USDA says that 2,207,265 chickens were tested and notes that the cumulative total July through August was 3,838,266, up 16% from these months in 1960.

The number tested for supplying egg-type chicks was 537,319, up 18% from August of a year before. July through August testings of 862,981 were up 11% from the same period a year before.

The number of heavy breed turkeys tested during August was 16% larger than a year before. USDA pointed out that the increase occurred in the testings of heavy white breeds. Heavy whites tested totaled 165,236, up 79% from a year before. Other heavy breeds tested totaled 103,281, down 26% from a year earlier. During July and August of this year testings of heavy white breeds totaled 237,627, up 30% from those months in 1960. Other heavy breeds tested during the two months totaled 160,538, down 25% from 1960.

Testing of light breed turkeys in August, 18,234, was down 46%. July-August testings totaled 36,905, down 25% from the same period of 1960.

Cooperative Officials Discuss Broiler Action

WASHINGTON — Representatives of a group of southern cooperatives are reported planning to contact other broiler industry groups to determine the "feasibility of a self-help stabilization program for the broiler industry."

This was indicated by the U.S. Department of Agriculture following a meeting in Washington of cooperative officials from five southern states. A USDA release on the meeting reported that "producer representatives said their discussions involved consideration of a self-help stabilization program." (Feedstuffs, Sept. 23.)

If an industry-wide program is desired, USDA said, the secretary of agriculture would be asked to appoint an industry committee which would study the situation and recommend new legislation and program plans "needed to enable broiler producers to manage supplies, stabilize markets and maintain prices fair to producers and consumers."

The announcement noted that marketing orders had been proposed for poultry.

USDA listed the following as attending the meeting: G. D. Arndt and M. J. Wood, Farmers Cooperative Exchange, Raleigh, N.C.; J. E. Givens, W. D. Moore and Howard Gordon, Southern States Cooperative, Richmond, Va., and A. E. Beall, Mississippi Federated Cooperative, Jackson, Miss. Others were D. W. Brooks and C. W. Paris, Cotton Producers Assn., Atlanta, and J. C. Kemmett and C. W. Tilson, Central Carolina Farmers Exchange, Durham, N.C.

Turkey Prices Decline

ST. PAUL — Minnesota turkey prices recorded Sept. 28 showed a general decline of 1¢ lb. compared with a week earlier.

The Sept. 28 "mostly" prices for young hens and young toms were 15½¢ and 13½¢, respectively.

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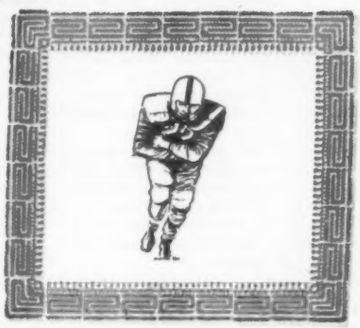

"Carry the ball"

Ever since the origin of football, the man selected to "carry the ball" on a critical play has been the one who can be counted on to gain the necessary yardage. Since 1925, the expression has been in common usage, applying to the leader in any field of endeavor. Today, the man—or the company—that "carries the ball" is a leader, one with proved ability to get the job done on important assignments.

Ever since the origin of the dehydrated alfalfa industry, Small's Dehydrated Alfalfa has been the brand that has "carried the ball." Every major improvement in product resulting from improved techniques of harvesting, dehydrating, storing and shipping has been available first in the Small brand. Today, as always, Small's is the recognized leader in quality and value. That's why experienced feed buyers who "know the score" still select Small's Dehydrated Alfalfa to "carry" the ball in their feeds.

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FOR FEEDS WITH A FUTURE

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Minnesota Conference Offers Poultry Feeding Suggestions

By ROGER BERGLUND
Feedstuffs Managing Editor

ST. PAUL—Research information and formulation suggestions on the latest developments in poultry nutrition were presented at the Minnesota Nutrition Conference for Feed Manufacturers at the University of Minnesota.

The event, sponsored by the university and the Northwest Feed Manufacturers Assn., this year included discussions of some of the most timely subjects for feed men and nutritionists in both the poultry and livestock areas. More than 200 nutritionists and others from the important feed manufacturing area of the Twin Cities and the Northwest were present to hear reports by Minnesota scientists and leading authorities from other institutions also.

The poultry nutrition papers covered such things as:

—Calcium and phosphorus for laying hens, and factors affecting egg shell quality.

—Protein requirements of replacement pullets, including the possibility of reduced protein to delay maturity.

—Energy values of feedstuffs.

—Controlled feeding of heavy breeding hens.

—Processing and utilization of full-fat soybeans.

—Diets for turkey breeders.

Following are summaries of poultry reports. (Reviews of livestock nutrition papers will be presented later.)

CALCIUM AND PHOSPHORUS FOR THE LAYING HEN—Some of the latest developments, along with current formulation suggestions, in calcium and phosphorus nutrition of laying hens were outlined by Dr. Edwin P. Singsen of the University of Connecticut.

In connection with all of the recent work indicating the need for more calcium in laying rations, Dr. Singsen noted that percentage of calcium alone can be misleading; what is really important is total daily calcium intake in relation to the need. This is dependent upon rate of egg production and is modified by environmental temperature, energy level of the diet, phosphorus intake and other factors.

On the basis of recent work and many older studies, Dr. Singsen made the following suggestions on calcium levels in all-mash laying rations:

Low energy rations or broiler breeder rations—at moderate temperatures, 2.25 to 2.75% calcium; at high temperatures, 2.75 to 3.0%.

High energy rations or rations for small bodied high-producing birds—moderate temperature, 3.0 to 3.5% calcium; high temperature, 3.5 to 4.0%.

If one goes much beyond this, retention is not increased, and if the level is too high, one may actually depress utilization. One can generally assume 50% retention of calcium.

Dr. Singsen also discussed new developments in research on phosphorus in laying rations. Several studies had produced some interesting and conflicting results. He presented some details of an extensive Connecticut project to reinvestigate the laying hen's requirement for phosphorus and to develop a low phosphorus ration satisfactory for evaluation of availability of phosphorus in various supplements.

Dr. Singsen said work indicates that a readjustment is needed in thinking on phosphorus; also it will be necessary to reevaluate calcium-phosphorus ratios.

He mentioned that the results show that birds laying at a high rate and fed a high energy ration do respond to phosphorus supplementation and that the effects of a phosphorus deficiency may not be apparent in the early weeks or months of egg production, thereby minimizing the value of short term experiments.

He noted that it is apparent that not all current researchers agree that maximum egg production can be sustained over a long period on low levels of total phosphorus coming primarily from plant ingredients.

Dr. Singsen said it is his present opinion that available phosphorus in high energy laying rations should be maintained at not less than 0.45% (or about 0.6 to 0.7% total) for birds managed on litter and 0.55% for birds in cages or on other types of floors where they do not have access to the droppings. (It was shown that phosphorus in the litter becomes greater than in the ration, with much of it available phosphorus.)

The values were calculated by assuming 100% availability for the phosphorus in animal products and high quality phosphate supplements and 50% availability for all phosphorus in plant products, according to Dr. Singsen.

He prefaced these suggestions with data on the Connecticut work on various levels of phosphorus.

Among other things, he mentioned that there was a depressing effect on egg production if the level was too high. Regarding deficiencies, it was noted that birds on wire show the effects of deficiency much more than those on litter. So far as shell quality is concerned, there is little effect from phosphorus.

Commenting on calcium-phosphorus ratios, Dr. Singsen said that if there is about 0.6% total phosphorus, one could go to about 4% calcium before running into trouble. He said he didn't expect any difficulty with calcium levels if there is 0.6 to 0.7% total phosphorus.

In telling of Connecticut poultry research, Dr. Singsen mentioned that use of all-night lights increased egg production during the first 16 weeks. For a whole year, there is better egg production if all-night lights are used. One gets more eggs in a total year's time. There has not been a comparison with an increasing light system.

(Turn to MINNESOTA, page 102)

MINNESOTA CONFERENCE—Some of the speakers and participants in the Minnesota Nutrition Conference program are shown here. In the first photo, left to right, are Dr. E. G. Hill, Hormel Institute, Austin, Minn.; Dr. Paul Waibel, University of Minnesota; Dr. Edwin P. Singsen, University of Connecticut, and Dr. L. E. Hanson of Minnesota, the program chairman. The second picture shows Dr. D. C. Snetsinger, Dr. R. N. Shoffner and Dr. Elton Johnson, all of Minnesota.

FARM POLICY

(Continued from page 1)

This means that we face considerable uncertainty in the feed and animal production sectors of agriculture. The rules of the game are going to continue to change.

Farm policy legislation will be packaged in an ever increasing number of new forms with new titles. It's going to be chock-full of new gimmicks and promises to cure more evils than an old-time patented medicine man's tonic.

The three main events in the farm policy arena in 1961 directly related to the feed business are:

1. The increase in corn price supports from $1.06 to $1.20 per bushel for compliers who signed up to idle about 20 million acres of corn land.
2. The increase in soybean price supports from $1.85 to $2.30 bu.
3. Enabling legislation permitting marketing orders for turkeys.

Let's consider the programs separately and look at probable influences on the feed business.

CORN—Approximately one half of the nation's corn growers complied with the 1961 feed grain program and will be paid in the neighborhood of $700 million. In return for the payment and the eligibility for price supports, they agreed to reduce corn acreage 18% below 1960. But, as expected, the production response has been considerably less. The Sept. 1 crop report reflects only a 10% reduction from last year in the total bushels for harvest as grain.

Based on Sept. 1 production estimates, total feed grain production this year will be down 18.5 million tons, or about 12% from last year's record.

Estimated corn supplies now appear to be about 150 million bushels less than requirements, so it appears that a small reduction in Commodity Credit Corp. stocks is probable in 1962. The reduction, however, will not be nearly so great as that planned and confidently predicted by program advocates early in the season.

The new feed grain program faces real trouble. The USDA has indicated disposition plans for 850 million bushels in the next 12 months. For each bushel sold beyond the small net amount needed from CCC stocks, the CCC can anticipate receiving a bushel of corn next spring from producers eligible for loan. But if CCC sales are big enough to cause farm prices to stay below the net farm loan up to the take-over time for 1962 crop corn, producers likely will deliver even more than the 850 million bushels the CCC hopes to sell.

Looking ahead at corn prices, the intended CCC sales program looms as the biggest single factor. It means that corn prices will not average as high as the 14¢ increase in the loan rate might suggest. But prices probably will average a little over the 99¢ U.S. farm average 1960-61 season.

Other important considerations in corn prices this year are (1) the loan entry required to tighten free supplies, and (2) timing of market recognition of the possibility of tight supplies.

The planners will have difficulty in maintaining a widely divergent two-price system for corn. Producers are alert to the profit to be obtained from feeding their non-complying neighbor's cheaper corn and putting their own under loan whenever they can. This exchange should take place freely at 20-25¢ under the loan and suggests that farm prices of corn in the harvest season this year should average about 95¢ in Illinois for good feeding quality corn in the harvest period. This compares with a harvest season low of 82¢ for November and an average of 90¢ for October-November-December received by farmers in Illinois last year.

What happens to corn prices next spring and summer is up to the public administrators. Until we have been able to observe the patterns of those now making the decisions; it is difficult to try to forecast the outcome. But in a congressional election year, might we not look for stronger prices during the summer and fall months prior to the election dates?

LONG-RUN IMPLICATIONS OF FEED GRAIN PROGRAM—One cannot predict the exact long-run effects of the current feed grain program without making assumptions about its permanence, the level of supports and the incentives and penalties provided. Attempts to limit feed supplies and boost prices will result in less meat, milk and eggs than would otherwise be the case. This means higher prices to consumers for these essential foods.

But the immediate effects could be to encourage more hogs for next year. If corn prices are held down by CCC sales long enough for producers to start believing that relatively low corn prices are a reasonable expectation for some time to come, hog numbers probably will expand.

The September pig crop report suggests that farmer interest in hogs is picking up momentum. Farmers in 10 Corn Belt states reported their intentions to farrow 5% more sows in September-October-November this year than last year. Farrowing intentions for December, January and February are up 4% from last winter.

SOYBEANS—The increase in soybean price support from $1.85 national average for the 1960 crop to $2.30 for the 1961 crop promises temporary good news for livestock feeders. Farmers responding to the increase in price supports and to last year's good prices and aided by good weather are headed for a record soybean crop. Because of the big increase in supplies of soybean meal, considerably lower protein costs for animal feeds are assured.

Statistical analysis of the significant elements influencing soybean meal prices suggests that prices this year will average $8-$12 below the $61 average for the past season.

You will remember that soybean meal last year touched a low of $42-$45 Decatur, unrestricted billing, then jumped to the $80 area in the last week of April. With this kind of price rise (1) forward bookings of high protein feeds proved quite profitable to feed users, and (2) forward purchases of soybean meal were desirable for feed manufacturers.

The price pattern this year likely will be quite different. With an increase of about 26% in total soybean supplies we can look for the domestic crush to be larger in the feeding year ahead. In fact, the crush will be as large as soybean oil exports will permit.

Edible oil exports hang over our head as the biggest uncertainty in evaluating soybean meal prices. If the USDA is as successful in the oil export programs as it now hopes, soybean meal could stay at low levels all year.

This year the prospects don't appear as favorable for bookings. It is difficult now to foresee the time when bookings of high protein feeds might be made within the next four to five months with the expectation of sizeable price advances, but market conditions are always subject to change.

FEED PRICES IN 1961-62—Let's summarize the effects of current programs by concluding that (1) corn and related feedstuff prices will be higher next year, and (2) soybean meal and related proteins will be substantially lower than in the last 12 months.

When weighted according to the content of typical complete rations, we look to somewhat higher ration costs for cattle and hog producers for the average of the next 12 months (October, 1961, through September, 1962).

The cost of poultry rations will be very close to the average of the previous 12 months. You will recognize

that this differs with the expectations of some other forecasters. (Feed Survey Committee, Feedstuffs, Sept. 16.)

MARKETING ORDERS, SUPPLY MANAGEMENT AND RELATED ISSUES—Up to this point, we've discussed specific farm programs directly concerned with the feed ingredient picture and predicted some of their consequences in relation to ingredient prices, animal numbers and feed bookings. We must now depart from specific situations and look into the broader aspects of public policy relating to the feed business, for it would be pure folly to try to discuss or evaluate the many conflicting propositions now being kicked around within the poultry industry. But we can review some important economic principles pertinent to the discussions.

Many persons, in periods of low prices, come to the conclusion that government market regulation is much better than bankruptcy, threatened or real. Low prices in 1961 account for the increasing interest in marketing orders for turkeys and broilers.

People in an industry become interested in supply management for one big reason—they expect higher prices to prevail than otherwise would be the case. Many forget, however, that it is not possible to hold prices higher than those that would exist in free markets without:

a. Reducing the level of domestic consumption per capita.
b. Expanding production and building burdensome surpluses, unless **effective** production control is accomplished.
c. Placing a premium on the finding of substitutes for commodity involved.
d. Causing great shifts of productive resources within this country.
e. Encouraging farmers in other lands to gradually expand their output in order to absorb our export markets.

Artificial income-boosting efforts are not a cure for over-production. In fact, they provide further incentive for production to out-pace consumption.

A vital part of supply management is production control. When prices are held at artificially high levels, production must be controlled, for prices no longer can perform their function of guiding resources into, or out of, the endeavor involved.

Effective production control is not a likely prospect for major livestock and crop enterprises in the U.S., because effective policing is not a political reality.

This society is not yet ready for the regimentation and policing necessary for **effective** supply control on major crop and livestock enterprises.

Effective control of output means that all factors of production must be restricted. These are land, labor and capital. There can be no other practical solution for limiting surplus production if agricultural incomes are to be permanently improved through price supports.

Where land is a major consideration, such as in the production of grains, land restriction policies such as the soil bank and the current land retirement efforts are not effective tools of supply management.

Supply management has been tried over a period of several thousand years under all sorts of governments —absolute autocracies, monarchies, democracies, socialistic governments, governments based on communism, fascism, feudal systems. Every kind of experiment known to man has, at one time or another, been tried out as a means of controlling the production and distribution of goods and services.

Leaving the direction of production and consumption up to the judgment of all the people in a free market has offered more long-run benefits and a greater degree of individual liberty than any plan ever tried to date.

"He who lets the world, or his own portion of it, choose his plan of life for him, has no need of any other faculty than the ape-like one of imitation. He who chooses his plan for himself, employs all his faculties. He must use observation to see, reasoning and judgment to foresee, activity to gather materials for decision, discrimination to decide, and when he has decided, firmness and self-control to hold to his deliberate decision."—Thomas Jefferson.

Security Mills Post To J. D. Johnson

KNOXVILLE, TENN.—J. D. (Don) Johnson has been appointed director of production for Security Mills, Inc., Knoxville, according to announcement by James E. Skidmore, president.

J. D. Johnson

Mr. Johnson will be responsible for supervision of all phases of production and delivery service for Security Mills. He will headquarter at the firm's Knoxville office. Before joining Security Mills, Mr. Johnson was production superintendent of the feed division for General Mills, Inc., Minneapolis.

California Feed Firm Liquidated

By Special Correspondent

SAN FRANCISCO — Announcement has been made of the liquidation of the Andersen-Smith Milling Co., San Francisco.

"This announcement affords us no pleasure," said George L. Andersen, president of the 35-year-old firm. "However, developments beyond our control have, after long consideration, convinced us that this step is in the best interests of the company's stockholders."

Thirty-five years ago, industry observers said, George Andersen had the idea of building a scientific concentrate formula to mix with grain and "simples" readily obtainable in various country areas. He, his brother, Grover Andersen, and Richard Smith formed Andersen-Smith Milling Co., with headquarters on Fisherman's Wharf, San Francisco.

The concept was described as good —some said "years ahead of itself" —and the firm grew, and its "Double Check" mix was a familiar name in California. Mr. Smith and the others became leaders in California feed circles.

Then, said a veteran industry observer, "major mills found the idea suited their interests also, and, in addition, they went into financing. This cut into Andersen-Smith's business, and this factor, coupled with the tremendous increase in property values on Fisherman's Wharf, caused the firm to reevaluate its present position and to make the announcement of the liquidation."

In connection with the notice of liquidation, Mr. Andersen said: "Disassociation with the friendships and good will with which we have been favored over the past more than 35 years is one of our deepest regrets at this turn of events."

The notice of proceedings to dissolve the firm said: "Notice is hereby given that, by written consent of the shareholders representing more than 50% of the voting power of Andersen-Smith Milling Co., the said corporation has elected to wind up its affairs and to dissolve, and proceedings to that end have commenced." This was dated June 12. It was signed by directors George I. Andersen, Grover A. Andersen, Richard J. Smith, Louis J. Petralli and B. W. Malone.

Future Customer's Needs Require Close Scrutiny

By GEORGE L. GATES
Editor of Feedstuffs

CHICAGO— The kinds of customers the feed industry will be dealing with in future years and the types of service required to serve them profitably were described by three speakers at the Marketing Seminar sponsored by the Sales Executives Council of the American Feed Manufacturers Assn. Sept. 20-21.

Future customers were analyzed from the standpoint of their needs for technical service, money management and marketing assistance. Understanding of these needs, it was emphasized, is basic in planning the marketing direction of individual feed companies. Here are summaries of these discussions:

TECHNICAL SERVICE NEEDS OF CUSTOMERS — "The economic reality of the average farmer being in the feed business looms larger each year," Elmer C. Denis, manager of marketing research for Doane Agricultural Service, St. Louis, said. "With the increase in size of operation and the resulting mounting in size of the feed bill, it is only natural to expect that farmers will re-evaluate their alternatives for feed procurement."

Elmer C. Denis

The farmer of the future will examine all of his costs more closely, analyzing each component, Mr. Denis said. "He may not be able to itemize all costs, but he will place an increasing burden upon you and your dealer to justify the functions you perform and the services you provide."

Additional services, almost without exception, add to the cost of marketing, and this always raises the question as to whether added costs of a particular service can be justified, he noted.

Mr. Denis then listed the kinds of service provided by the feed industry in three categories in analyzing what the farmer of tomorrow is likely to consider essential and worth paying for.

The first of these he termed highly scientific: Development and testing of feed formulas to create improved feeds. Determination of livestock nutrition requirements.

Those in the second category require considerable training and experience or unusual facilities to perform: Purchasing of best raw materials, assembly of these materials in field warehouses and formulating precisely balanced feeds, utilizing numerous micro-nutrients.

In the last category he listed those which require no unusual facilities or experience which, theoretically, may be performed by the end user as well as the middleman: Mixing ingredients to a predetermined ration, using supplements, premixes and concentrates; delivery; payment for products (the credit service); warehousing at point of processing; record-keeping to determine results.

"It is in the first two service areas that the feed industry developed and has continued to make the greatest economic contribution to livestock agriculture, while the latter service area was assumed by the industry as it grew," he observed. "To one extent or another the industry has continually been in competition with the feeder for the rewards of the economic contribution made by these services.

Trends Change Situation

"Under the conditions where the feeder has not had the time, the know-how, the capital for equipment, or the inclination, he has willingly farmed these services out to his feed supplier. But in recent years a number of trends have developed which have changed the situation."

The trends are these, as listed by Mr. Denis:

1. With specialization, farmers are now more capable of mixing rations to specifications from micro-ingredients, premixes and concentrates.

2. Capitalization has taken place vertically rather than horizontally. That is, farmers are buying more production equipment rather than more land. Both lenders and borrowers are becoming more oriented to the idea of investment in on-farm mixing, storage and transportation to cut production costs.

3. As farmers reduce the number of enterprises on their farms, they have more time to devote to remaining enterprises.

4. The cost-price squeeze has forced the farmer to examine all areas of farm expense, and thus there is a natural inclination to reexamine the "let the dealer fill the feeders" attitude. "Even so," he said, "most

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SALES EXECUTIVES OFFICERS—Paul Cory (right), general sales manager of Moorman Mfg. Co., Quincy, Ill., is the new chairman of the Sales Executives Council of the American Feed Manufacturers Assn. He is shown presenting a plaque to Robert D. Emmons, general sales manager of Wirthmore Feeds, Inc., Waltham, Mass., for outstanding service as immediate past chairman of the council. Earl P. Mitchell, sales manager of Alabama Flour Mills, Decatur, Ala., is the new vice chairman of the council and program chairman for next year's Marketing Seminar. The presentation was made during this year's seminar held in Chicago Sept. 20-21.

PRODUCTION HANDBOOK—Sales of the new Feed Production Handbook were reported good during the Feed Production School in Kansas City. In this photo, the "book salesmen" are Bill Kahle (left), Merck & Co., Kansas City, and Darrell Young (second from left), Calcium Carbonate Co., Carthage, Mo.—both of whom are familiar figures at the registration desk of the Production Schools. The buyers in the above photo are Austin McKee, Dodge City (Kansas) Co-op Exchange, and Donald L. Unruh, Ulysses (Kansas) Co-op Oil & Supply Co. The big 288-page book is available to all feed men at a price of $25.

Soy Meal Prices Continue to Fall

By F. C. BISSON
Feedstuffs Special Correspondent

CHICAGO — Cash soybean meal continued to probe deeper and deeper into new low ground during the past week. Prices of $52 and $47 recorded Sept. 27 for 44% unrestricted and Eastern Trunk Line billing, respectively, were the lowest of the year. Prices for 50% protein, at $57 and $52.50, respectively, for unrestricted and E.T.L. billing, equalled the calendar year lows made back on Jan. 18. Meal futures at Chicago were acting heavy, too, although they did not show quite as much relative easiness as did the cash commodity.

One of the reasons for the current price situation can be laid in part at the doorstep of the very unsatisfactory broiler price structure, plus seasonal tapering off in demand for turkey feeds. But over and above everything else are the effects of the government's feed grain program.

Last week, Commodity Credit Corp. sold 7½ million bushels of corn domestically. If sales are continued at that pace for a year, they will account for 400 million bushels or 80% of the total amount of corn that normally passes into commercial channels during any 12-month period.

Still another item affecting bean meal prices is the recent announcement of the U.S. Department of Agriculture authorizing the purchase of 400 million pounds of soybean oil for foreign donation. When the processors fill this 400 million pound oil order, they'll be making approximately 850,000 tons of bean meal.

Feed Firms Pledge Funds for Turkey Study

ST. PAUL—The Minnesota Turkey Growers Assn. is awaiting approval from the Institute of Agriculture, University of Minnesota, to begin construction of a building on the university campus for turkey research in the areas of temperature and environment control, Roy Munson, association secretary, announced.

Construction of the proposed building is to be financed from funds pledged by feed manufacturers and the association. Mr. Munson said $9,300 already had been pledged toward the total estimated cost of $12,000.

Feed manufacturers who have pledged funds include: Doughboy Industries, Inc.; Farmers Union Grain Terminal Assn.; General Mills, Inc.; International Milling Co.; Land O'Lakes Creameries, Inc.; Peavey Feed Mills, and Ralston Purina Co.

USDA Comments on Big Broiler Output

WASHINGTON—U.S. Department of Agriculture economists had some comments this week on not only the sustained broiler production but also (until more recently at least) increases from a year ago, even in the face of extremely low prices.

USDA, in its poultry situation report, noted that egg settings have just recently been cut back from a year earlier, but attention was called to continued large production of broilers. Until late November anyway, slaughter will be ahead of 1960.

Here's what USDA had to say about the structure of the industry and "strategy" of individual firms:

"The explanation for the continued large volume of production despite unfavorable prices must be sought in the peculiar structure of the broiler industry. The industry is largely integrated in its hatching, feed supply and slaughternig stages, so decisions regarding production schedules and volumes of production do not change readily. Also, most of the integrated units that had been in production during 1960—generally a profitable year—came into 1961 with financial reserves that permitted them to undertake several broods that risked losses, in preference to bearing the costs of reopening after shutting down. Contractors using this line of reasoning probably feel that if they were to reduce or suspend operations, and then attempt to resume on their normal scale, they would find that their accustomed growers and customers had made other tie-ups.

"While this philosophy would explain sustained production even in view of an unfavorable current situation, it is an insufficient explanation for increased production. The explanation for this may lie in the strategy of individual firms, who may feel they have sufficient staying power to ride out the present low prices and who hope to have large volumes to sell after the rest of the industry has reduced its production."

USDA pointed out the states in which July and January-July broiler hatchings increased most:

State	1961 Broiler Hatchings as % of 1960 July	January-July
Maine	108	101
Minnesota	208	172
Missouri	104	120
Delaware	99	100
Maryland	86	101
Virginia	85	95
North Caroline	117	121
Georgia	110	112
Alabama	111	113
Mississippi	114	117
Arkansas	131	129
Texas	116	118
California	114	120

With the exception of Minnesota (which in 1960 produced 7 million broilers), the above are among the most important broiler states, said USDA. Minnesota was included, it was indicated, to show the effect of a production promotion recently carried on in that state.

DEHY

(Continued from page 1)

ka, Colorado and low temperatures in Kansas put a curb on plant growth in these areas. There will be some cutting for a week or two yet in some places in these states, but sparse stands are not likely to be cut, and most of these western plants are running only part-time now.

In Nebraska particularly, most plants are down to a one drum operation and generally only one shift at that. Nebraska will have very little fifth cutting alfalfa this year, and the season is terminating earlier than normal, just as the spring was later than normal.

A report from west Texas indicates similar short working time there, with hay making only about ½ ton per acre. This is hardly profitable cutting and labor is getting hard to hold near the end of the season because of a need to turn to other winter jobs. So no long continuation of output is likely.

Since most shipments hereafter will have to come primarily from material now in storage, major producers have raised prices to cover these carrying costs.

Consumption of dehy has been running heavy so far this season. Based on recently issued government figures, August disappearance amounted to 132,500 tons, compared with the five year average of 117,400 tons. The disappearance for the entire August-May period was 491,500 tons compared with 467,180 tons for the five year average. Projecting this 5% increased rate would mean a record disappearance if maintained for the entire crop year. Dehy has been relatively low priced compared with other feed ingredients during recent months.

HOG FEED

(Continued from page 1)

season and possibly into the 1962 spring farrowing period.

It has been observed that a price ratio as high as 16 to 1 has been historically accompanied by a 10% increase in hog production as farmers attempt to convert corn into pork, for which they typically receive 2½ times as much money.

The hog price picture looks good for the rest of 1961 and well into 1962. Hog slaughter is expected to go up seasonally this fall, but the gain probably won't be large enough to push prices down to points unprofitable for the producer. And if a downward price trend does come along late this year, the decline is expected to be slight and relatively gradual.

University of Minnesota agricultural extension specialists, for instance, look for low prices on average barrows and gilts to come in December. And they are recommending that producers accelerate their feeding programs this fall in order to move hogs to market as early as possible.

Why isn't the current hog cycle following the usual pattern? Why, in view of the favorable operating conditions experienced by producers, isn't the hog business headed into a big expansion phase immediately?

Here are some of the reasons:

—With the feed grain program as the prompting factor, many livestock producers scaled back their hog operations to match their reductions in corn acreage.

—When price supports for corn were raised $1.06 bu. to $1.20 for the 1961 crop, it was logical for some farmers to think that maybe they could come out just as well growing corn for cash as well as growing it for hog feed.

—"Uncertainties surrounding the feed grain program," observes the Federal Reserve Bank of Chicago, "have brought a stretching out of the current hog cycle, not an end to it."

Regional Broiler Hearings to Be Oct. 2

WASHINGTON—The Special Subcommittee on Small Business of the House of Representatives, which has been looking into the broiler industry, will resume hearings next week with field hearings, according to Rep. Tom Steed of Oklahoma.

The first field hearing is scheduled to be held at Neosho, Mo., Oct. 2, at the Newton County Court House.

There are also reports that additional field hearings may be held in Arkansas, Texas and possibly some other areas.

Chairman Steed said the field hearing at Neosho was arranged because Congressional members requested it after receiving numerous complaints as to pricing and marketing practices there.

MEMBERSHIP APPROVED

PORTLAND, ORE. — Nine firms have been approved as members of the Oregon Feed & Seed Dealers Assn. This number increases the new member total for the year to 18, eight above the quota established for the 12-month period. New members are: Inland Poultry & Feed, La-Grande, Ore.; Hawkins-Hudson, Inc., Pendleton, Ore.; Dick's Farm Store, Langlois, Ore.; North Texas Nursery, Fairfield, Cal.; Cornett Green Feed, Heppner, Ore.; Albers Feed & Farm Supply, McMinnville, Ore.; Multiwall Bag Operation, Boise Cascade Corp., Berkeley, Cal.; Farmterials, Baker, Ore., and Haines (Ore.) Grain & Feed.

PURINA

(Continued from page 1)

able Dec. 12 to stockholders of record at the close of business Nov. 21.

He further stated that the board of directors had approved, subject to the approval of stockholders at their annual meeting Dec. 15, increasing the authorized common stock from 8 million shares with a par value of $5 per share to 20 million shares with a par value of $2.50 per share.

Subject to approval, there will be distributed to the stockholders of record at the close of business Nov. 21, one additional share for each share then held. The new certificates will be mailed out Dec. 21.

Mr. Danforth stated that it was the intention of the board to declare a quarterly dividend of 20¢ a share payable March 1, 1962. This is equivalent to a quarterly dividend of 40c a share on the present shares.

Following the stock split of two to one, the company would have available approximately 6 million shares for use in expansion and other corporate purposes, said Mr. Danforth.

He further stated that the board of directors had approved the company's applying to list its common stock on the New York Stock Exchange, such listing, if approved, to become effective late in December, 1961, or early in January, 1962.

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FIRST-DAY PARTICIPANTS—Pictured here are feed industry representatives who participated as speakers and discussion leaders during the first day of the 1961 Feed Production School at Kansas City. Subjects covered included: Standard feed production terminology, products control, bulk dry materials handling and storage and packaged materials handling. In the first photo are, from left: Lloyd Larson, president, Feed Production School, Inc.; Gerald A. Karstens, Feed Age, Chicago; Dr. Herbert S. Wilgus, The Ray Ewing Co., Pasadena, Cal.; James G. Pierce, Walnut Grove Products Co., Inc., Atlantic, Iowa; Warren Armstrong, Nutrena Mills, Minneapolis, and Eric A. Carlson, Ralston Purina Co., St. Louis, general chairman of the 1961 school. The second photo shows, from left: First row—Jackson R. Fitzgerald, Wolf Management Engineering Co., Chicago; Art Stegner, Butler Manufacturing Co., Kansas City, and David M. Parker, M-E-C Co., Neodesha, Kansas; second row—Alan Cook, Butler; Don F. Shimon, Butler; Sidney E. Brong, M-E-C, Kansas City; Eric Carlson and Jim McKillip, Jr., International Manufacturing Co., Cedar Falls, Iowa.

'The Year the Handbook Was Born'

1961 Feed Production School Provides Data for Practical Use

By FRED E. TUNKS
Feedstuffs Staff

KANSAS CITY—Plans are already well along for the 1962 Feed Production School, but it'll be a long time before the 1961 school slips into a cob-webbed corner of forgotten industry gatherings. This year's school will no doubt be remembered as especially significant because it gave birth to the first edition of the "Feed Production Handbook," "the first handbook of an industry prepared by the industry for the industry."

The handbook, which represents the dedicated efforts of more than 50 industry representatives and the experiences and thinking of many more, was introduced during the 1961 school (Sept. 11-13) as the school's official textbook and as the feed industry's unofficial production guide and reference. This first authoritative textbook of modern feed production was undertaken as a project of Feed Production School, Inc., "to aid feed production personnel in building a more efficient and profitable operation, despite the ever-growing complexity of our industry."

Its contents, as described by the handbook's editor-in-chief, Dr. Harry B. Pfost, department of flour and feed milling industries, Kansas State University, are the result of exploring the most critical phases of feed production and they provide practical recommendations for meeting a variety of circumstances and requirements. Future editions of the handbook, Dr. Pfost notes, will deal with other important aspects of feed manufacturing and findings of current research affecting the feed industry.

Most of the information which appears in the first edition of the "Feed Production Handbook" was presented orally as lectures or in group discussions during the 1961 school at Kansas City, which was attended by approximately 525 feed industry representatives.

It is possible, then, to review both the proceedings of the 1961 school and the contents of the handbook at one time. And that's just what has been done in the following paragraphs, which include excerpts and briefed material from the handbook. For the sake of simplicity, the review is organized according to the order and style of the material published in the handbook.

CHAPTER 1, THE FORMULA FEED INDUSTRY, by Dr. Robert W. Schoeff, Kansas State University—Dr. Schoeff, project leader of formula feeds extension work for Kansas State's flour and feed milling department, traces the industry's historic milestones; describes the industry's present purpose, structure and facilities, and looks ahead into the industry's future.

CHAPTER 2, FEED PRODUCTION TERMINOLOGY, by Gerald A. Karstens, Feed Age magazine, Chicago.

Realization of the need for precluding feed industry production standards with standard terminology resulted in the presentation of the first tentative list of feed and processing term definitions. These definitions, prepared by Feed Production School's definitions committee under the chairmanship of Mr. Karstens, appeared in the Sept. 23 issue of Feedstuffs on pages 11-14.

CHAPTER 3, BASIC PROCESSING OPERATIONS.

Grinding and Rolling, by Carl Stevens, Kansas State University—This sub-chapter explains the theory of grinding; describes the construction and operation of hammer mills, attrition, burr and roller mills.

Theory of Mixing, by Dr. Waldon Hastings, Kansas State University—In scientific terminology, completeness and accuracy, Dr. Hastings tells what is known about the action of mixing and describes mathematical methods of evaluating mixer performance.

Pelleting—Introduction and General Definitions, by Roy Robinson, California Pellet Mill Co., Crawfordsville, Ind.—What it takes in the way of equipment and processes to produce pellets and crumbles is outlined by Mr. Robinson. This sub-chapter covers pellet mills, supply bins, coolers, crumblers, elevating systems, sifting devices and steam supply.

Weighing and Proportioning, by W. L. Hamilton, Richardson Scale Co., LaGrange, Ill.—Installation and use of automatic batching systems are described.

Feed Processing Machines, by R. W. Fredrikson, the Strong-Scott Manufacturing Co., Minneapolis — This section is intended to acquaint the student or feed man with the general purpose and construction of equipment used for various processing operations.

Elementary Process Flow Design, by John Wessman, Grain Processing Machinery Manufacturers Assn., Kansas City — Mr. Wessman discusses how to arrive at the design of a feed mill. "The first consideration is to determine what kind of end product the feed mill produces; what quality product is desired and in what quantity," he writes. "The solution involves three basic steps: (1) Design of a process flow to show the major processing operations required to produce the feed product; (2) layout and design of the process flow into three-dimensional plan showing the location of all machines, bins, structures and related equipment, and (3) selection of the exact equipment which will be required to produce feed at the required capacity and quality specifications."

CHAPTER 4, PROCESS FLOW DESIGN.

Introduction to the Problem, by Stanley F. Juscen, Wirthmore Feeds, Inc., Waltham, Mass. — Mr. Juscen notes that the elements of process flow design discussed in Chapter 3 were applied in the preparation of Chapter 4 to develop suggested process flows to satisfy production requirements of four typical plants of different capacities—30, 100, 200 and 400 tons per eight-hour shift.

"A purpose of this study," Mr. Juscen says, "is to assist the feed mill operator who contemplates a new manufacturing facility or plans improvement of flow designs in an existing mill. Principles developed are intended to serve as helpful, sound and practical guides for the industry . . .

"These designs are the result of several compromises which had to be made to allow the process flow to be incorporated into a feasible manufacturing plant. For purposes of illustration, many typical equipment types are shown . . .

"This presentation shows the decision processes which must be used to produce a complete plan from which a feed mill could be built . . .

"Operating factors and requirements should be established before a process flow design can be effectively prepared and utilized. Following the selection of mill location and transportation facilities, these factors must be determined before preparing the flow:

"1. Productive capacity desired in a given number of operating hours per day.

"2. Ingredient receiving description which will establish per cents of whole grains, grain by-products/soft feeds, liquids and miscellaneous materials (additives, micro-ingredients, etc.).

"3. Storage requirements based on expected operating inventory and the number of ingredients to be handled.

"4. Per cent bulk and per cent sacked ingredient arrivals.

"5. Anticipated daily formula diversification.

"6. Types of feeds to be manufactured.

30- AND 100-TON MILL GROUPS—Process flow, plant layout and design and operating standards for mills in the 30-ton class were discussed during the 1961 Feed Production School by the three men in the first picture. They are, from left: T. E. Stivers, T. E. Stivers Co., Decatur, Ga.; C. Hewitt Chandler, Consumers Cooperative Assn., Kansas City, and Melvin A. Jurgens, DeKalb Feed Co., DeKalb, Ill. The 100-ton mill session was conducted by the three feed industry representatives in the second photo. They are, from left: Lawrence B. Gould, Beacon Milling Co., Cayuga, N.Y.; Tom J. Hoover, Walnut Grove Products Co., Inc., Atlantic, Iowa, and W. B. Briggs, Norris Grain Co., Chicago.

COPIES OF HANDBOOK AVAILABLE

KANSAS CITY — If you haven't yet obtained copies of the first edition of the 288-page hard-cover "Feed Production Handbook" for yourself or for others in your plant or office, you can do so by sending $25 in check or money order for each copy to: Feed Production School, Inc., 20 West Ninth St. Building, Kansas City 5, Mo.

"7. Texture of feeds to be manufactured.

"8. Market demand for the finished product, including per cent bulk and per cent sacked.

"9. Shipment distribution, i.e., volume via rail and volume via truck."

30 Tons Per Day, by Melvin A. Jurgens, the DeKalb Feed Co., DeKalb, Ill.—This section, like the others in the process flow chapter, is concerned with general specifications and requirements covering: Production capacity, basic formulas, types and textures of feeds, ingredient receiving, storage, processing, bagging and finished feed distribution.

In his discussion of the justification of a 30-ton feed mill, Mr. Jurgens says: "Some might think of the 30-ton mill as a custom service mill . . . The success of this mill will depend upon the ability to furnish the farmer with services at a lower cost than the farmer can provide them for himself . . . Development of a 30-ton-per-day capacity mill presents many problems, and many small mills are built in steps as finances permit."

100 Tons Per Day, by Lawrence B. Gould, Beacon Milling Co., Cayuga, N.Y. The flow design and description appearing in this section illustrate one way of laying out a 100-ton mill. "It may seem 'marble fronted,'" Mr. Gould notes, "but it is a starting point from which a practical mill of 100 tons per eight hour day may be designed to manufacture feeds for all animals."

200 Tons Per day, by Stanley F. Juscen, Wirthmore Feeds, Waltham, Mass.—Given general factors and requirements representing a theoretical mill with a capacity of 200 tons per 8-hour shift, Mr. Juscen outlines the flow of this theoretical mill through ingredient receiving, grinding, oat crimping, premixing, batch mixing, pelleting, fat application, storage and shipping.

400 Tons Per Day, by Robert L. Stroup, Sprout, Waldron & Co., Inc., Muncy, Pa.—Mr. Stroup explains that while the flow design of the theoretical plant used as a guide in the 400-ton mill section does not specifically represent any existing feed plant "it does represent, in individual parts of the system, flow designs which have proven very efficient." He notes also that "while this mill has been designed for a capacity of 320 to 480 tons per 8-hour day, most of the flow principles shown would be applicable for smaller capacity mills; even to a 10- to 20-ton-per-hour mill."

CHAPTER 5, PLANT LAYOUT AND DESIGN.

Introduction, by T. E. Stivers, T. E. Stivers Co., Decatur, Ga.—Objectives of the chapter on plant layout and design, as told by Mr. Stivers, are to outline some concepts underlying feed mill design, to outline some general principles of feed mill design, to present examples of layout drawings and typical views of feed mills of different sizes, to explain the reasoning which precedes layout decisions and to suggest possible alternatives in design.

Mr. Stivers explains that the basic specifications for the example mills of 30-ton, 100-ton, 200-ton and 400-ton sizes were developed by the general committee of the 1961 Feed Production School for the purpose of text examples. "They represent hypothetical assumptions regarding geographical area, ingredient availability, formulation, bulk and bag percentages, rail and truck movements, textured and mash feed breakdown, financial and managerial strength of owner and many other basic facts that must be known before planning an actual mill," Mr. Stivers says in the chapter's introduction.

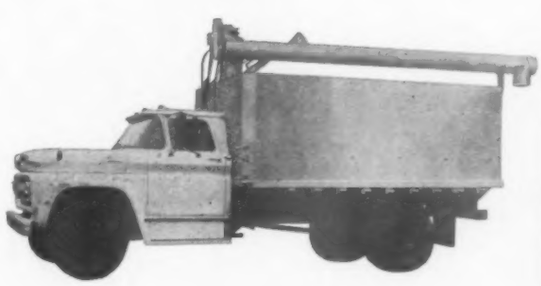
"Because the assumptions were hypothetical, it is almost self-evident that professional differences of opinion and practice would arise. For example, engineers designing solely for the eastern U.S. have different problems than those in the Midwest."

In this chapter, plant layout and design for a 30-ton-per-day mill is discussed by Mr. Stivers; W. B. Briggs, Norris Grain Co., Chicago, is the author of the 100-ton mill section, and the 200-ton section is by B. J. Lattyak, Hales & Hunter Co., Chicago. The chapter has no section devoted to the 400-ton mill.

CHAPTER 6, EQUIPMENT STANDARDS—Will Brooks, Illinois Farm Supply Co., Springfield, Ill., was chairman of the committee which developed this chapter. Contributors included: Walter Monti, Illinois Farm

(Turn to SCHOOL, page 90)

200- AND 400-TON MILL SPEAKERS—Responsible for 200-ton mill discussion at the Sept. 11-13 Feed Production School in Kansas City were (from left in first photo): J. D. Johnson, General Mills, Inc., Minneapolis; Stanley F. Juscen, Wirthmore Feeds, Inc., Waltham, Mass., and Bernard J. Lattyak, Hales & Hunter Co., Chicago. Ray J. Brinkman (at left in the second proto), Doughboy Industries, New Richmond, Wis., and Robert L. Stroup (at right in the second photo), Sprout, Waldron & Co., Muncy, Pa., conducted the 400-ton mill session.



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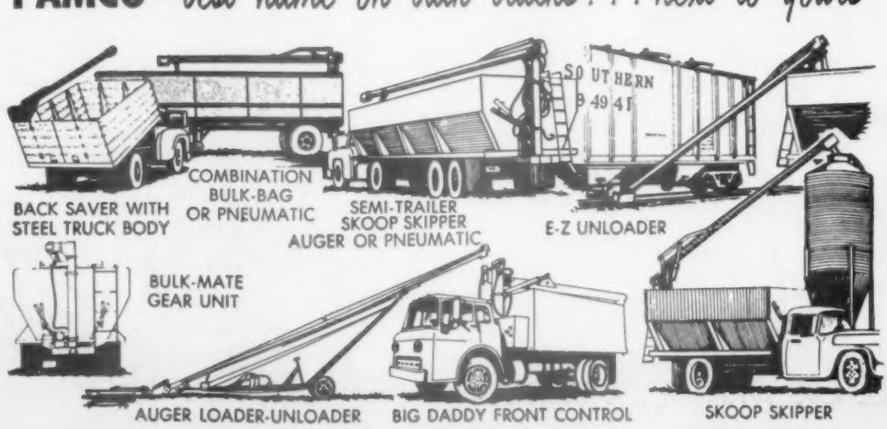

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Rep. Beermann to Talk At Omaha Meeting

OMAHA—A congressman very familiar with the feed industry will discuss agricultural programs and possible additional government controls in a talk at a meeting Oct. 16 in Omaha.

The speaker will be Rep. Ralph Beermann, Dakota City, Neb., who has been in the alfalfa dehydrating business for a good many years and who is cognizant of problems of the feed industry and animal agriculture. He will talk at a dinner meeting at the Town House in Omaha. The event will start with a social hour at 6 p.m.

The meeting is being sponsored by the Omaha Feed Club, with the Midwest Feed Manufacturers Assn. cooperating. Attending in addition to Omaha feed men will be Midwest members from Iowa and Nebraska. All other feed men also are invited to attend.

Congressman Beermann's talk is entitled "Operation Survival — Agriculture."

Ken Evans of Allied Chemical Co. is program chairman for this meeting of the Omaha club. Program chairman for the year is Don Braddock, Cereal Byproducts Co.; Max Mason, Thompson-Hayward Chemical Co., is club president, and Glenn Scott, Allied Mills, is secretary.

James McKillen Dies

BUFFALO — James G. McKillen, 79, who retired last March as president of his own grain firm, J. G. McKillen, Inc., died at his home after 63 years in the grain business.

Mr. McKillen entered the grain business as a stenographer for the former Chicago-O'Neill Grain Co. at the age of 16. He formed his own company in 1920. He was president of the Buffalo Corn Exchange in 1928 and in 1938.

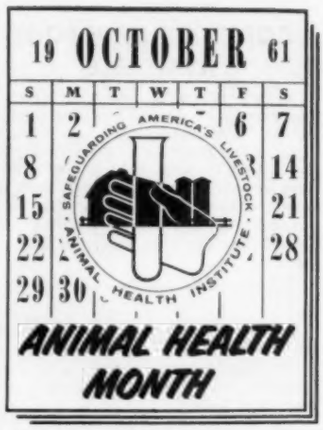
Plan Mutual Problems Discussion in Missouri

COLUMBIA, MO. — Feed industry people from Missouri and personnel at the University of Missouri will talk over mutual problems at an informal get-together here Oct. 7. The 10 a.m. meeting at the Daniel Boone Hotel will be followed by a luncheon. Many of the group will then attend the Missouri-California football game.

A busload of feed industry people and their wives will be going from Kansas City with others going direct to Columbia.

Sponsored by the Midwest Feed Manufacturers Assn., Kansas City, the college-industry get-together is a follow-up of a meeting held in May.

Missouri feed people who would like to participate in the meeting and luncheon are asked to make their reservations through the Midwest Feed Manufacturers Assn., 20 W. 9th St., Kansas City.



INSIGNIA—This design over a calendar for the month of October serves as the insignia for Animal Health Month, which will be observed throughout that month, according to the Animal Health Institute.

October Designated Animal Health Month

DES MOINES — Taking animal health and nutrition products out of their traditional "fire extinguisher" position is the aim of the Animal Health Institute here in its annual Animal Health Month to be observed throughout October.

The institute, representing animal health and nutrition product manufacturers, says that because this "fire extinguisher" idea continues to be widely held, disease, insect pests, internal parasites and market downgrading of animal products through quality deterioration impose a penalty of $2 billion a year on the livestock and poultry industries.

So, this fifth annual Animal Health Month, according to the institute, seeks to "lift animal health products out of their traditional position of cost items and loss minimizers and transform them into investment items and profit producers for the farmer through education."

The announcement continued, "No one is more aware than this industry organization that meticulous management — which includes the highest standards of sanitation—is basic to disease control. But, even this is far from dependable. The careful manager who uses modern health products as a planned part of his health maintenance practices finds they permit him to make more efficient use of his facilities, cut down on labor requirements and reduce risks and make greater profits."

APPOINTS AD AGENCY

SPRINGFIELD, OHIO — Buckeye Incubator Co., Springfield, has appointed H. D. Weber & Co., Hartford, Conn., as its advertising and public relations agency.

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George Wilbur, Sharon, Connecticut poultryman sets out on one of his thrice-weekly delivery trips. Under the name of Odge's Eggs he has built a thriving business for a quality product.

Odge, as he is known locally, keeps very careful records on all his birds. Here is what one flock of 1040 Sex Links did in 6 months in 1960:

MONTH	DOZEN EGGS	% PRODUCTION	POUNDS FEED	POUNDS FEED PER DOZEN
Feb.	1661	66%	(no record)	—
Mar.	2431	90%	10,200	4.19
April	2299	88%	9,675	4.20
May	2215	82%	9,388	4.24
June	1985	76%	8,787	4.42
July	1865	69%	8,175	4.38
			Five Month Average . . .	4.286
			Eggs per bird housed (6 months):	143.7

He fed Wirthmore Chick Starter SQ for 8 weeks;* Wirthmore Grow & Egg & Scratch (60-40) to 16 weeks; Wirthmore Hi-Ener-G Layer Arsan 16 weeks on.

In December 1960, 5000 birds in 3 flocks in production from 2 to 11 months were *averaging* 80%. Mr. Wilbur has been feeding Wirthmore for 5 years.

**New Wirthmore PACKAGE PLAN requires only 6 weeks' feeding of new Chick Starter.*

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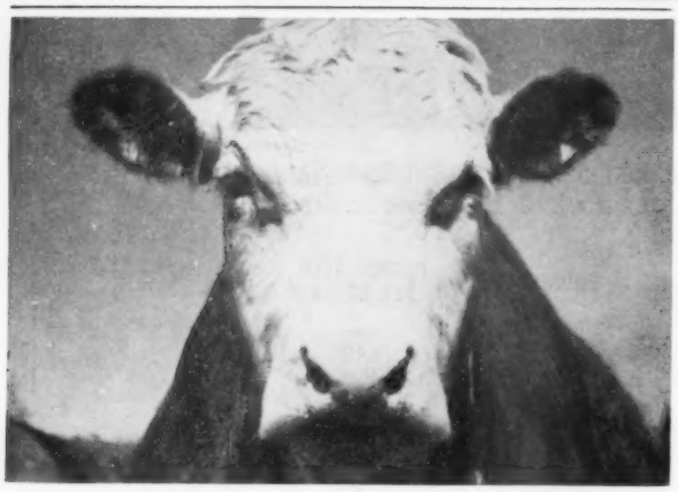

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BROADWAY, VA. SELBYVILLE, DEL.

NEW ENGLAND POULTRY FORMULAS AVAILABLE

BURLINGTON, VT.—The annual New England feed guide for chickens and turkeys has now been released, according to Prof. Donald C. Henderson, chairman of the poultry science department at the University of Vermont.

The guide, entitled "Chicken and Turkey Rations—1962," lists the practical formulas recommended by the New England College Conference Board. These recommendations are based on experimental work done in New England, plus research conducted elsewhere.

Members of the New England board meet at least once a year, review their experimental work and then come out with formula recommendations.

Any interested person may obtain a free copy of the formula recommendations by writing to Poultry Science Department, Hills Building, University of Vermont, Burlington. The other New England colleges offer the same service.

The poultry ration material annually has been requested by feed men and others throughout the U.S. as well as in foreign countries.

Changes in Dairy Feeds Told by GLF

ITHACA, N.Y.—A modernization of its dairy and stock feed lines has just been announced by Cooperative G.L.F. Exchange, Inc., here.

The changes, as noted by Dr. Kendall L. Dolge, director of animal nutrition, include: Fortification with trace minerals, addition of vitamins A and/or D, lower fiber guarantees and simplified dairy feed lineup.

Dr. Dolge pointed out that for some years cobalt and iodine had been included in dairy feeds, and that the remaining trace minerals, manganese, zinc, iron and copper, are also added now. He said that this can be done for a few pennies per ton of mixed feed.

Dr. Dolge told G.L.F. patrons, "Our decision to fortify with vitamins A and D was made because you are feeding your cows differently and because your cows are producing more milk. We just don't have precise requirements for these two vitamins for high producing cows. The natural source of vitamin A is carotene, and roughage is the principal source of carotene. The trouble is roughage supplies anywhere from 2 mgs. of carotene per pound (the low reading for timothy hay) to 180 mgs. (the best alfalfa pasture). Any given kind of roughage will vary 100% or more. At the same time, you are using less pasture, feeding more grain and decreasing roughage intake generally.

"The supply of vitamin D also is very variable in hay, which is the most important source. There is less in barn than sun cured, less in early cut than in mature."

Dr. Dolge said that 12 changes have been made in fiber guarantees. He indicated that most are reductions of 0.5%.

In simplifying the dairy line, G.L.F. is no longer offering Dry and Freshening Ration or 14% Super Dari and Nov. 1 will drop Fitting Ration, Dr. Dolge stated. He explained, "These all can be replaced by Super Fit-N-Fresh."

General Mills Holds Feed Dealers School

MINNEAPOLIS—A dealers' school to provide General Mills SureFeed dealers with the latest sales and merchandising helps and information on livestock feeding programs was held here by General Mills, Inc., Minneapolis.

In attendance at the event, which was held in the Leamington Hotel, were 110 General Mills SureFeed dealers, wives and sales representatives.

Subjects covered at the school by General Mills speakers included "Dairy and Beef Feeding Programs," Dr. C. W. Johnson, livestock research associate; "Swine Industry Trends," Paul Jensen, production consultant; "Sales Tools," K. F. Denison, north central region sales manager; and "Dealer Merchandising," B. H. Borgendale, north central region merchandising manager.

The event was one of a series of three annual dealer schools conducted by General Mills at Minneapolis, Madison, Wis., and Des Moines.

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Cyanamid Opens New Agricultural Center

PRINCETON, N.J.—"The farmer's future rests in the hands of research people. Only a steady stream of new products from the laboratories will keep farm producers competitive," said C. D. Siverd, general manager of American Cyanamid Co. Agricultural Division at the opening of the new Cyanamid Agricultural Center. The center, rated as the most comprehensive privately-owned facility of its kind in the world, is located near here on a 640-acre tract of land.

C. D. Siverd

Mr. Siverd continued his remarks, "With our chemists turning out thousands of new chemicals every year, we must provide adequate facilities for testing their effects on laboratory animals, crops and livestock. By the time a chemical is accepted by the Food and Drug Administration and the U.S. Department of Agriculture, it has gone through hundreds of tests to insure that it can be used safely, and that it does the job farmers expect of it.

"A large company faces a constant problem of communication among its staff members. The men who contact the farmers, learning their problems and needs, must be able to discuss the farmer's requirements with the chemists, and with the crop and livestock scientists testing the chemicals. Now that we have all our research, development, marketing and over-all administration together, we can reap the benefits of a close daily association and exchange of ideas.

"Many people have questioned the wisdom of chemical product development if government regulations were to be stiffened, and testing procedures made more exacting. We accept the challenge to our development efforts and are expanding our research efforts. We recognize our responsibility to consumers as well as to farmers and understand the obligation imposed by such responsibility.

CYANAMID CENTER—This is an architect's drawing of the research and development building at the Cyanamid Agricultural Center which was dedicated Sept. 25. This building is the largest of three on the campus-like site of the new American Cyanamid Co. facility near Princeton, N.J.

"We have a multi-million dollar investment here and we have the confidence that our people will make that investment a wise one. Our reputation has been built on technical reliability, and we intend to keep it that way."

Asked about the research policy at the Cyanamid Center, Mr. Siverd replied, "Our research efforts must be directed as much along fundamental lines as they are toward immediate product developments. Only by encouraging constant probing on the frontiers of knowledge can we provide new areas for our development people to investigate. Our Aureomycin antibiotic came originally from one man's curiosity about the molds found in soil. Today it is the basis for an entirely new concept in nutrition — increasing the efficiency of livestock feeding by lifting the livestock health level. Who knows what new and revolutionary ideas in agricultural management will come to fulfillment at our Cyanamid Agricultural Center?"

Center's Facilities

The Cyanamid Agricultural Center which Mr. Siverd said may provide new and revolutionary ideas in agriculture consists of three buildings—a research and development laboratory, administration building and cafeteria building.

The laboratory building is the largest of the three buildings and includes offices, laboratories, a library, greenhouses and air conditioned livestock pens for observation of domestic farm animals.

In the administration building are the executive offices of the American Cyanamid Co. Agricultural Division, including production, marketing, advertising, sales, personnel and purchasing.

The cafeteria building is designed to serve both as a place for employees to eat and as a meeting and conference site.

American Cyanamid reports that $1 million worth of laboratory equipment has been installed in the center. Equipment includes: a sterile chamber for growing baby chicks; artificial laboratory silos; radioactive metering devices; rainmaking machine; insect rearing laboratory; greenhouse chambers for the control of humidity, temperature and light to duplicate any combination of weather conditions, and housing facilities for cattle, sheep, swine and poultry typical of those on commercial livestock farms for study of management methods under normal production conditions.

Cyanamid says there are 550 employees at the new center, 300 of them scientific and technical personnel. Most of those 300 persons were relocated from New York City; Pearl River, N.Y., and Stamford, Conn.

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International Paper Ups Paper Bag Price

NEW YORK—A spokesman for International Paper Co. has advised that effective on orders accepted after Oct. 16 its prices for multiwall bag papers will be increased 50¢ cwt. and its base prices for multiwall bags will be increased 4%.

The firm said that these increases will only partially restore price reductions made on these items by the company during the past six months.

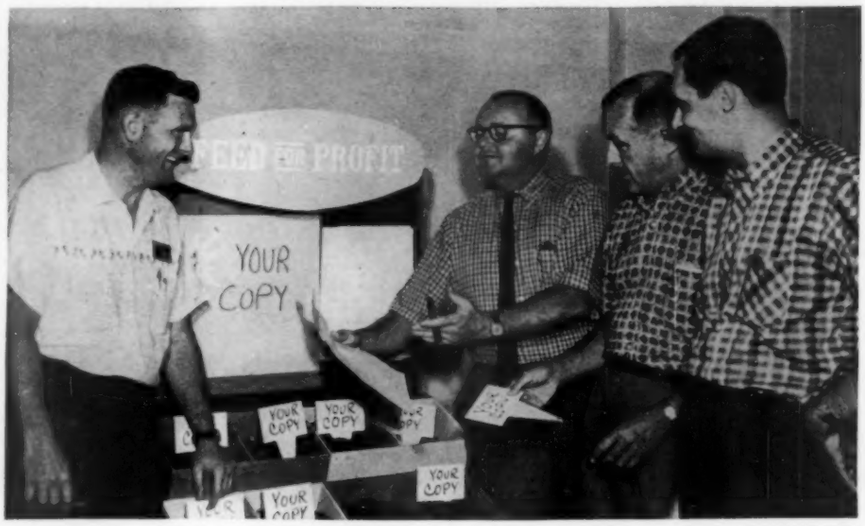
How your Pfizer men keep up-to-date

Earlier this month, they were in Chicago for an intensive training course in livestock and poultry problems, to background them on new developments in the field . . . college experiment results . . . new feeding techniques . . . improved disease-control programs. The week-long meeting at the spacious Edgewater Beach Hotel in Chicago, Ill., was a shirt-sleeves, paper-and-pencil session of give-and-take between instructors and students. Turn the page and follow these Pfizer men as they . . .

Learn how to serve you better...

Checking the new technical manual before the week-long training begins are, seated l. to r.: J. Jerome Thompson, Vice President and General Manager of the Agricultural Sales Division; Hugh O. Dermody, Assistant General Manager; Robert L. Robinson, Marketing Co-ordinator. Standing are: Frank W. Tuppeny, Sales Operations Manager; and Al E. Wilson, Field Sales Manager of Feed Supplement Products.

Frequent panel discussions on new developments and improved disease prevention methods were held with the instruction staff from Pfizer's Agricultural and Research Development Department at Terre Haute, Ind., and Groton, Conn., Research Laboratories. Seated, l. to r., are: Warren Reynolds, Manager of AGRAD; Drs. J. E. Fahey, E. B. Patterson, Simon J. Kalish, Hilmer Jones, W. D. Crawford; Robert Wornick, Professional Engineer; and Drs. Blake W. Blakewood and Raymond Fields.



Stirring up new interest in selling feed was Pfizer's "Feed-eteria" display being looked over by, l. to r.: Jack Lawler, Ozark District Feed Supplement Specialist; Fred A. Manley, Director of Advertising and Sales Promotion; Wilson; and William A. Staempfli, Advertising Manager.

Another new idea was a feed industry "Rose Bowl" contest on vitamin A uses —here being reviewed with several regional managers—Stephen J. Motiska, southeast; Manley; Joe Taylor, Feed Supplement Product Manager; E. G. Schmidt, midwest; John C. Overmyer, western; Karl D. Chandler, southwest; and Wilson.

High scholarship winners were congratulated and awarded prizes by Hugh O. Dermody. They are, l. to r.: Garth McDermott, Illinois Representative; Ed Budd, North Carolina; Rudy Lawrence, California; Hilton Terry, Idaho; and Jerry Pitts, Feed Supplement Specialist for the eastern region.

Here they are—all the Pfizer representatives. Can you find yours?

It was a busy week
but now your Pfizer men are back on the job . . .
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Predict Changes in Egg Marketing, Pricing Systems at Maine Event

ORONO, MAINE—A streamlining of the marketing system of eggs, and changes in the price making mechanism for determining wholesale prices of eggs were predicted by a panel of marketing experts at the annual poultry day held at the University of Maine Portland campus.

Some 150 Maine poultrymen and industry people heard Dr. Alfred Van Wagenen, director of research and development, Northeastern Poultry Producers Council, Inc., Trenton, N.J., describe the changes in egg marketing which have occurred during the past 10 years that have reduced the number of middlemen involved from as many as eight down to as few as two. The dependence upon terminal market receivers as the focal point for price making on eggs will be reduced in the future, he predicted.

Paul Gifford, a Boston egg receiver, stated that New England producers received the highest price for eggs of producers in any section of the country, and urged increased attention to quality to preserve this premium market. Howard Whelan of Eastern States Farmers Exchange, West Springfield, Mass., predicted an increase in producer-egg handler marketing contracts or agreements, and more buying and selling of eggs on a specification basis. Wyn Gehgan of North American Poultry Cooperative, New York City, discussing foreign markets, stated that the opportunities are definitely limited.

Dr. F. J. Bird, new head of poultry department, University of Maine, talking on the subject of egg shell quality, suggested keeping houses cool in the summer as a means of improving shell quality. The much publicized use of vitamin C in the ration to improve egg shells has not proved successful, he stated.

On the farm egg handling, including mechanized egg collecting, was discussed by Stanley Williams of Wilton; Stanley Jones of Mechanic Falls; Roland Dutch of Kennebunk, and Relland Fox of Eddington.

Dr. Linley E. Juers of U.S. Department of Agriculture, stated that the recent inclusion of turkeys as eligible for marketing orders in the new farm bill will provide producers of eggs and poultry meat with valuable experience on the applicability of this approach to market stabilization to the poultry industry.

The poultry day meeting is sponsored jointly by the Maine Poultry Improvement Assn., Oscar Turner of Livermore, president, and the Maine Cooperative Extension Service.

ADDED FACILITIES

SHERIDAN, IND. — The Wallace Grain Co., Inc., has announced the addition of new facilities for improved feed service. Lisle L. Wallace, owner of the firm, said the latest additions include an additional Prater twin-spiral mixer, California pellet mill, 48,000-bu. Butler bins and a pit screw.

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Agency Will Probe Chain Stores' Role In Meat Marketing

WASHINGTON—The U.S. Department of Agriculture's Packers and Stockyards Division is reported to be preparing an investigation of big retail food chains' activities in the meat and poultry industry—all the way from farm to the hands of the consumer.

The stated reason for the investigation is the contention by some that the chains' power is serving to curb competition, rig prices and discriminate against farmers, consumers, stockyard operators and even the big packers, once a favorite target of anti-trust suits.

It has been indicated that if some government suspicions are borne out, orders would be issued to halt certain illegal marketing practices. Or, it is suggested, the livestock dealing licenses of some firms could be suspended.

Some persons are reported to feel that considerable attention will be focused on large chains which have their own packing facilities, including Great Atlantic & Pacific Tea Co., Safeway Stores, the Kroger Co., First National Stores, National Tea Co., Food Fair Stores and American Stores Co.

Clarence H. Girard, new administrator of the Packers and Stockyards Division, is reported to be busy recruiting auditors and investigators. He is conferring with farmers, and he is planning a meeting late this year with retailers, packers, stockyards officials and other meat-industry men. It is said that he will soon launch small pilot investigations based on various complaints to the government. Company records are to be subpoenaed and sample audits taken, it is said.

Additive Approval Procedure Proposed

WASHINGTON—The U.S. Department of Agriculture has proposed to establish uniform procedures to be used by those seeking approval for use of chemical additives in poultry products processed under federal inspection.

This proposed amendment to regulations governing inspection of poultry under the Poultry Products Inspection Act would require submission of data to show that the chemical would: (1) Be non-deleterious; (2) have a beneficial effect on the product; (3) not promote deception or cause the product to be adulterated or unwholesome.

In addition, it would be required that labels on consumer packages of raw poultry carry conspicuous wording to indicate the use of the additive. Provisions also would be made for requiring similar labeling on cooked poultry products.

The proposal was scheduled for publication in the Sept. 2 issue of the Federal Register. Interested persons will have 30 days from that date in which to send comments to the Director, Poultry Division, Agricultural Marketing Service, U.S. Department of Agriculture, Washington 25, D.C. Copies of the proposed amendment may be obtained upon request to the same address.

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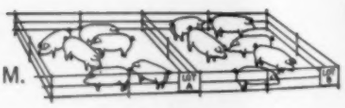
BY SPENCER H. MORRISON, PH.D., D. V. M.



The Effects of Supplementary Detergents on the Digestibility of Poultry Diets

● W. Bolton, A. R. C. Poultry Research Centre, Edinburgh, Scotland. The Journal of Agricultural Science, Vol. 57, Part 1, pp. 83-86, August, 1961.

ABSTRACT AND COMMENT

Although the use of various types of detergents has been investigated previously in poultry diets, it has been some time since much work has been done in this field in this country. With the development of high fat containing broiler diets, etc., it is interesting to note the results of this Scottish test utilizing 10% added fat in the diet. Theoretically, during the digestion of fat, negatively charged fatty acid ions are produced (from the breakdown of the fat into fatty acids and glycerol) and the presence of a non-ionic detergent in the diet should aid emulsification of the fat prior to its hydrolysis and thereby increase the digestibility, especially if high amounts of fat are present in the diet. On the other hand, while an anionic or a cationic detergent would aid in the emulsification of the fat, the anionic detergent would be a competitor for the positive charge in the enzyme system responsible for fat breakdown, while the cationic detergent would tend to combine with the fatty acid ions. In both cases, this should result in reduced digestibility of the fat and poor results in terms of growth, feed conversion, etc.

Small scale tests were conducted with additions of non-ionic detergent (0.3% Lissapol N), anionic detergent (0.3% Teepol L), and cationic detergent (0.1% Cetavlon) to a 10% fat diet (beef tallow). All detergents increased feed conversions and the cationic and anionic detergents increased live weights. The non-ionic detergent depressed weights slightly. It should be emphasized that these results are based upon very small numbers of birds (three to six birds per group, unreplicated).

The results of the digestibility trials suggest that the non-ionic detergent aided the digestion of fat, but protein and carbohydrate digestibility were unaffected. On the other hand, the anionic detergent slightly and the cationic detergent seriously impaired the absorption of fat. Also, the cationic detergent had an adverse effect on carbohydrate digestion while neither affected the protein digestion. On the basis of the digestibility results, it can readily be seen that relatively little emphasis should be placed upon the growth and feed conversion data secured, as they conflict decidedly with each other.

The results do help to explain partially those results which have been reported by March and Biely (1957) in which beef tallow additions at the 12% level were not improved in digestibility when either lecithin or Santomerse-80 was also present in the diet. But, Fedde et al. (1959) found that the addition of 0.1% ox bile to a diet containing 20% beef tallow resulted in a significant increase in the digestibility of the fat. In bacteriological media, the anionic detergent Teepol L can substitute for ox bile. In spite of this, Deuel has stated in The Lipids (Vol. 2, p. 235, Interscience) that "it is impossible to improve the digestibility of highly digestible fats by the use of emulsifying agents." The term "highly digestible fats" is not defined.

Since the results appear conflicting, and since many types of detergents are available for experimentation, it appears that further work with high fat diets fed along with detergents is necessary. The theories advanced do not jibe with the practical results obtained so far.

●

Timely and Worth Noting

Numerous studies have been conducted previously to compare performance of broilers raised at varying housing densities. Common commercial practice is to allow 1 sq. ft. of floor space, but many feel that when market price of broilers is low (as it is now) that birds should be housed at a rate of ¾ sq. ft. per bird. The trouble with many of the studies

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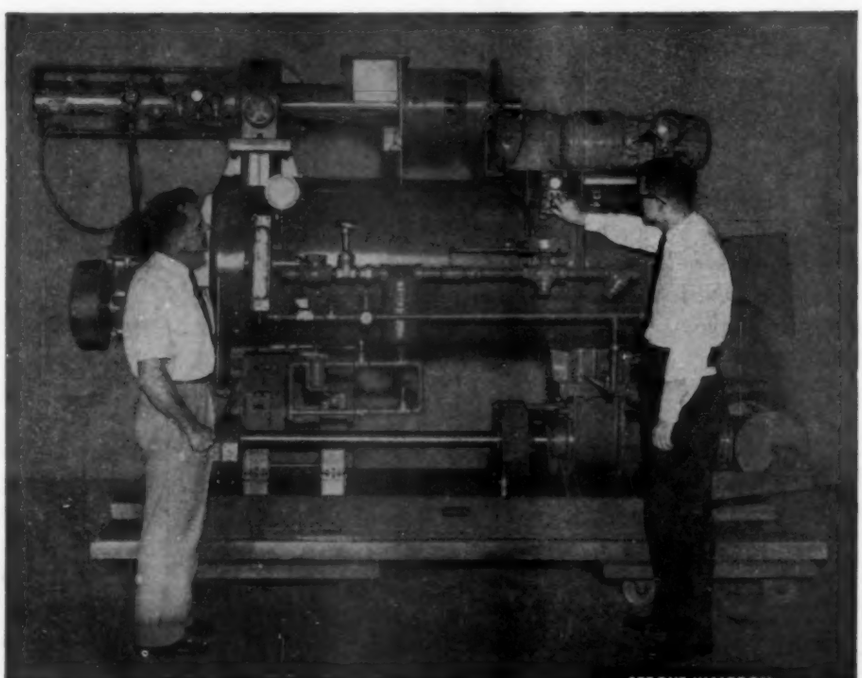

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The Sprout-Waldron continuous pressure cooker-extruder cooks or gelatinizes starches and cereal grains, creates an expanded, extruded, pellet-like or irregular shaped product in *one efficient, low cost method.*

Steam pressure replaces mechanical friction "cooking"—with only ¼ to ½ the horsepower of friction type extruders. The unit can be stopped and started during production without plug-up.

More complete cooking is another big advantage, yet retention time in the cooker is only 3 to 5 minutes. Positive control throughout includes provision for variable cooking temperatures, cooking retention time, degree of material agitation, and product size and shape.

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PGB-250 This is the trademark of DPi's dry vitamin A for fortifying feeds, pre-mixes, concentrates, and other products fed to poultry and livestock. The material consists of golden orange spherical particles in a size range between 30 and 120 mesh.

DPi has been a primary producer of vitamin A for a long time, was first to synthesize it commercially in this country, produces vitamin A in a modern plant using methods and processes developed in DPi laboratories.

Palmitate This is an inherently more stable form of vitamin A. It resists the effects of heat, moisture, and long storage. Testing vitamin A palmitate and the other commercial ester, vitamin A acetate, in stored feeds and premixes, we typically find 25% or better stability for the palmitate than for the acetate.

Gelatin is the most effective substance we have found for protecting vitamin A against air and minerals. Its digestibility makes the vitamin quickly available to the bird or animal.

250,000 The vitamin A potency of PGB-250 is 250,000 units per gram. You can also get potencies of 30,000, 20,000, or 10,000 units per gram. The diluent used in these dilutions is solvent-extracted soybean feed of particle size range especially chosen to blend with PGB-250.

You can get **PGB-250** *Dry Vitamin A* in 25-pound and 100-pound drums directly from us or from distributors throughout the country. For further information or a quotation, write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • Charles Albert Smith Limited, Montreal and Toronto.

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upon which recommendations have been made has been the fact that they were rather poorly controlled "field type" studies, or else the experiment was confounded with other factors such as feeder space, light, etc.

The Colorado workers (Moreng et al., Poultry Science, 40, 4, 1039-1044) have just revealed the results of a well controlled test conducted during four different seasons throughout the year. As a measure of the influence of floor space on growth rate to 10 weeks, data were gathered by sex of chick as well as body weight and feed conversion. Market grade, livability and percent litter moisture were also measured.

In general, it was found that the best results were secured at 1 sq. ft. per bird during the fall, winter and spring months. But, 1.25 sq. ft. per bird was needed during the summer under Colorado conditions to attain the equivalent growth. It would be interesting to find out if under southern conditions the 1.25 sq. ft. per bird rate would be necessary over a longer period of the year than it was in Colorado. The investigation also demonstrated that body weight of the bird as a function of strain of the bird was more important than age in determining the floor space requirements for optimum growth and development.

Another finding of great practical importance was the clear demonstration of higher percentage of grade A birds when the birds were allowed more floor space. As the industry becomes more competitive, this is important.

CCC to Sell Barley At Market Price in Pacific Northwest

WASHINGTON—The U.S. Department of Agriculture has announced that Commodity Credit Corp.-owned barley will be offered for sale at the market price in limited amounts in the Pacific Northwest through payment-in-kind certificates issued under the 1961 feed grain program. Sales will be made through the Portland ASCS commodity office.

"The sales will be made as needed to help stabilize prices to feed grain users in the Oregon-Washington-Idaho area, to avert disorder in the production and marketing of livestock and poultry," USDA officials said. "The action is in line with USDA's general policy of moderating the impact of feed grain adjustment during the transition to a more realistic relationship between supplies and demand."

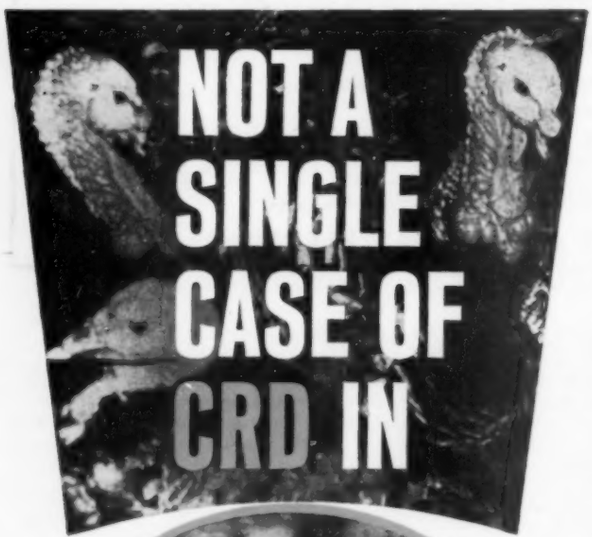
Under this policy, the department also is currently offering limited supplies of corn and grain sorghum at market prices. However, since CCC stocks of corn and grain sorghum are available for sale mostly at locations in distant areas of production, sales of these stocks with certificates do not materially affect the feed situation in the Pacific Northwest.

The certificate sales will not alter the eligibility of barley producers for 1961 support loans and purchase agreements. The 1961 support rate is 93¢ bu., national average, or 16¢ above the 1960 rate.

The certificates under which the barley will be sold were originally issued to farmers participating in the feed grain program. The certificates called for payments-in-kind from the CCC inventory to provide income to producers who adjusted their feed grain acreage under the program. "Many farmers exercised the option of designating CCC as their agent in marketing the grain and took cash instead," USDA said. "Through sale of the grain, CCC will recover the money advanced to program compliers and thus will carry out the program's objective under the law of financing the operation insofar as practical through payments-in-kind from government stocks."

Because most of the 1961 barley crop had been fall-planted before the feed grain program was developed, an adjustment in barley acreage was not required under the program provisions but barley was included among the feed grains which could be made available with certificates.

This action amends the CCC monthly sales list for September.



Success due to good farm management plus rations supplemented with Peebles' M-N-C

CRD (chronic respiratory disease) is the poultry affliction that many authorities state is by far the most frequent disease cause of poultry condemnations and is responsible for the loss of hundreds of thousands of dollars in poultry profits annually.

But in the 15 years the experimental farm of Western Condensing Company has been raising poultry, not a single case of CRD has occurred! And they have raised thousands upon thousands of broilers, layers and turkeys!

This amazing record results from two factors: The use of Peebles' M-N-C in all poultry rations plus good management.

M-N-C consists of appetizing milk nutrients that keep birds on full feed constantly, even during stress. And it is stress that leads to most cases of CRD.

Good management, too, is exceptionally important in CRD prevention. Crowding, poor ventilation, unsanitary conditions and other inadvisable practices pave the way for stress and CRD.

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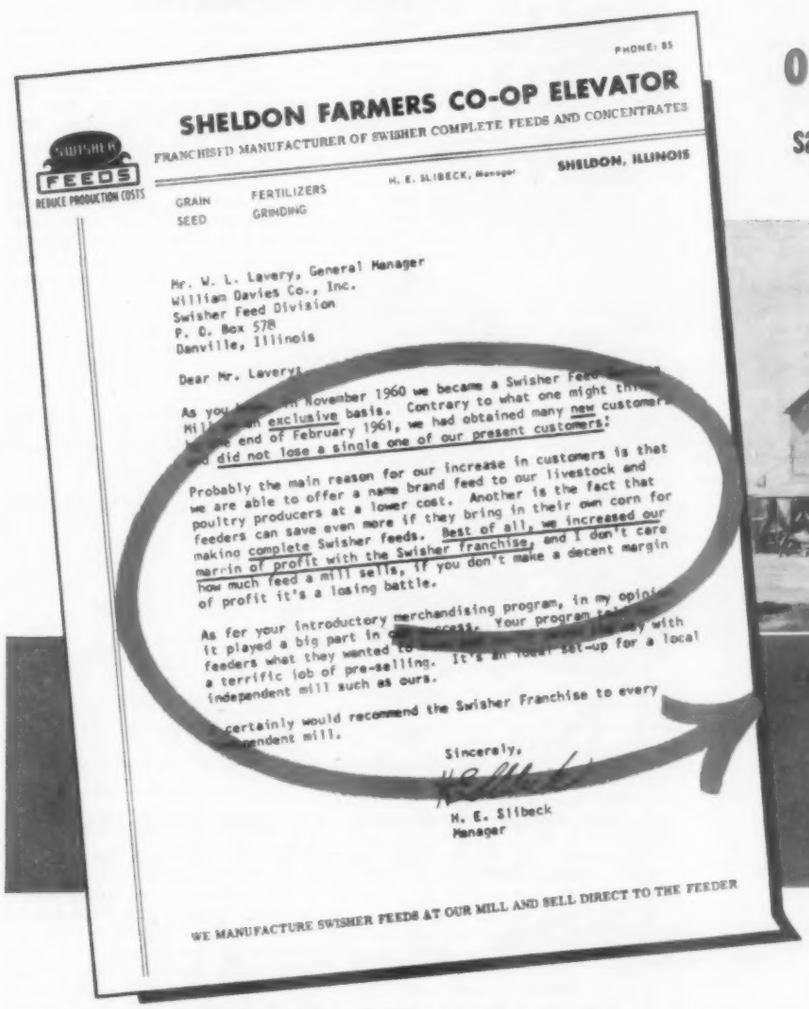

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Parakeratosis: Variation in Growing Pigs As Related to Location, Feed Source, Water Supply and Zinc Supplementation

By Dr. W. G. Pond
Cornell University
and
Dr. J. A. Hoefer
Michigan State University

Parakeratosis is a disease of swine characterized by mange-like skin lesions and retarded growth. Its occurrence is generally associated with the consumption of diets high in calcium and low in zinc. Supplemental zinc serves to prevent or quickly cure this condition. The relationships between calcium, zinc and parakeratosis have been reported by numerous workers (Luecke et al., 1956, 1957; Lewis et al., 1956, 1957; Tucker and Salmon, 1955). It has also been reported that other factors such as copper (Hoefer et al., 1960; Wallace et al., 1960) and autoclaving (Smith, 1960) have some influence on the incidence and severity of parakeratosis (PK).

It is apparent from the experimental reports in the literature and the many observations concerning the variability of manifestation and occurrence of PK in the field that this disease is a complex influenced by possibly a number of factors, many of which are unknown. The conflicting reports surrounding PK make for an intriguing as well as practical research problem. In order to gain additional information and perhaps shed a little light on what is now a somewhat cloudy situation a cooperative study was planned between Michigan State University (MSU) and Cornell University (CU).

Rations formulated identically and known to produce PK under MSU conditions, but differing in the sources of constituents, were exchanged for feeding at both locations. Feedstuffs purchased in the usual manner on the open market at each location were used in the formulation. The composition of the basal rations used is given in Table 1. Weanling pigs were used at both locations. They were assigned to the following ration treatments: (1) MSU basal ration; (2) MSU basal ration plus zinc; (3) CU basal ration, and (4) CU basal ration plus zinc. The growth, feed efficiency and incidence of PK of pigs fed each of the four rations at each location are summarized in Table 2. It will be noted that retarded growth and PK lesions were observed in all pigs fed the MSU basal ration under MSU conditions but that no PK lesions were observed in any of the pigs fed the MSU basal plus zinc, the CU basal or the CU basal plus zinc. Furthermore, under CU conditions PK failed to appear in any of the four groups and growth rate on the MSU basal ration was normal. It is especially significant that both the MSU and the CU basal diets contained 40 ppm. of Zn by analysis, yet the decided difference in the incidence of PK existed. In four littermate pigs at CU housed in wooden boxes and fed the MSU basal ration, PK developed in those provided with glass-distilled water but not in those given tap water (city water).

To further test the effect of water source on PK, a trial was conducted at CU in which the following four treatments were used with weanling pigs: (1) MSU basal, city water; (2) MSU basal plus Zn, city water; (3) MSU basal, well water and (4) MSU basal plus Zn, well water. The results of this trial are summarized in Table 3. It will be noted that PK appeared in all pigs fed the low-Zn diet when city water was supplied but in only one pig when well water was supplied, and that the average daily gain was greater (0.66 vs. 0.86) in the latter group. The pigs receiving the Zn-supplemented ration were again free of PK and showed performance superior to either of the low-Zn groups. The appearance of PK in this trial and not in the first trial under CU conditions lends further confusion to the problem, inasmuch as all pigs received city water in the first trial. Trial 2 was conducted in a different barn, suggesting that Zn contamination from the pen environment may have existed in Trial 1 (however, all metal parts of pens were lined with plywood and wooden feeders and cast iron water troughs were used in Trial 1).

A third trial was initiated to compare the performance and incidence of PK of pigs fed the basal ration (Table 1) formulated with midwestern corn (grown in northwest Illinois) with that of pigs fed the same basal ration formulated with corn grown in New York. The performance of pigs fed New York corn was superior to that of pigs fed western corn during the first four weeks of the trial. This difference was especially striking in the low Zn rations. No signs of PK have appeared in any pigs to date.

SUMMARY AND CONCLUSIONS—Preliminary observations from this cooperative project appear to justify the following statements:

(1) The calcium and zinc content of a feed cannot be used as the sole criteria for predicting the onset of PK in growing pigs (Trial 1).

(2) The water supply (Trial 2) and/or pen environment (Trials 1 and 2) can play a significant role in the development of PK.

(3) The source of feedstuffs may influence the performance of pigs fed a ration formula containing a high level of calcium (Trials 1 and 3).

These results raise many questions concerning the importance of feed origin, drinking water, availability of zinc, influence of other nutrients, variations in animals and pen environment in influencing the incidence of PK. It is obvious that more research is needed in this area.

The observations made as a result of this cooperative research between two experiment stations plainly suggest that what on occasion appears to be unnecessary duplication of research effort may in fact be highly desirable.

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TABLE 1. Composition of Rations

	MSU		CU*	
	Basal (—Zn)	(+Zn)	Basal (—Zn)	(+Zn)
	%	%	%	%
Corn	75.375	75.375	75.10	75.10
Soybean meal (44%)	16.00	16.00	16.00	16.00
Meal and bone scrap (50.55%)	2.00	2.00	2.00	2.00
Fish meal	1.00	1.00	1.00	1.00
Alfalfa meal (17% dehydrated)	2.00	2.00	2.00	2.00
Limestone	2.70	2.70	2.70	2.70
Dicalium phosphate	0.20	0.20	0.20	0.20
Iodized salt	0.50	0.50	0.50	0.50
Aurofac 2A	...	...	0.50	0.50
Aurofac 10	0.05	0.05	...	...
B_{12} conc. (P9 +)	0.05	0.05	...	...
B vitamin (M-50C)	0.10	0.10	...	...
A and D mix (10,000 A; 1,250 D/gm.)	0.025	0.025	...	...
Zinc	...	+	...	+
Total	100.00	100.00	100.00	100.00
Protein, %	17.06	16.38	17.00	17.38
Calcium, %	1.39	1.28	1.22	1.26
Phosphorus, %	0.52	0.50	0.48	0.48
Zinc, ppm.	40	100	40	98

*Trial 3 rations differed in that all rations were supplemented with the following: Niacin, 6 mg.; pantothenic acid, 5 mg.; riboflavin, 2 mg.; vitamin A, 1,200 I.U.; Vitamin D, 120 I.U./lb. of feed.

TABLE 2. Summary of Trial 1. Effect of Source of Feedstuffs, Location and Level of Dietary Zinc on Parakeratosis

Location	—Cornell (CU), Ithaca, N. Y.—				——Michigan State (MSU), E. Lansing, Mich.——			
Source of feedstuffs	Cornell*		Michigan		Cornell†		Michigan	
Source of pigs	Cornell		Cornell		Michigan		Michigan	
Zinc level	low	high	low	high	low	high	low	high
No. of pigs/lot‡	5	5	5	5	6	6	6	6
Days of trial	63	63	63	63	56	56	56	56
Average in weight, lb.	24	24	24	24	29	29	29	29
Average daily gain, lb.	0.95	0.91	1.10	1.21	0.66	0.90	0.34	1.02
Feed/lb. gain, lb.	3.64	3.27	3.17	3.40	3.68	3.38	4.72	3.28
No. with parakeratosis	0	0	0	0	0	0	6	0

*Vitamin D was added at a level of 1,420 I.U./lb. of feed to both low and high Zn Cornell rations after 28 days. Stiffness and unwillingness to move were noted in three pigs in each lot on 26th day of trial. Average daily gain for the first 28 days for pigs fed low and high Zn Cornell rations and low and high Zn Michigan rations were, respectively: 0.08, 0.78, 0.93 and 0.91 lb. rations and low and high Zn Michigan rations were, respectively: 0.80, 0.78, 0.93 and 0.91 lb.

†After 56 days pigs fed Cornell low and high Zn rations were split so that one half of the pigs in each lot were given 400,000 I.U. of vitamin D_3 intraperitoneally and 1,420 I.U. of D_3/lb. of feed were added to both diets. The remaining pigs were continued on the same diets with no supplemental vitamin D. After 18 additional days on trial the average daily gains of pigs fed Cornell low Zn, Cornell high Zn, Cornell low Zn plus vitamin D, Cornell high Zn plus Vitamin D were, respectively: 0.51, 0.70, 1.10 and 1.18 lb.

‡The CU portion of Trial 1 was conducted in new barn in which metal pens were lined with plywood. Trials 2 and 3 were conducted in main swine barn at C. U.

TABLE 3. Summary of Trial 2. Effect of Source of Water on Parakeratosis*

Water source	—Ithaca City Water—		—Ithaca Well Water—	
Ration	MSU basal	MSU basal + Zn	MSU basal	MSU basal + Zn
Number of pigs/lot	4	4	4	4
Length of trial, days	27	27	27	27
Average in weight, lb.	28.5	28.5	30.0	30.2
Average daily gain, lb.	0.66	0.99	0.86	1.03
Feed/lb. gain, lb.	3.42	2.91	3.57	3.05
Number with parakeratosis	4	0	1	0

*Trial conducted in main swine barn at C. U.

TABLE 4. Summary of Trial 3. Effect of Source of Corn on Performance of Growing Pigs Fed a High Calcium Ration*

Corn source	——New York Corn——		—Midwestern Corn—	
Ration	CU basal	CU basal + Zn	CU basal	CU basal + Zn
Number of pigs/lot†	9	9	9	9
Average daily gain, lb.	1.37	1.20	1.03**	1.19
Feed/lb. gain, lb.	2.90	3.24	3.32	2.94
Number with parakeratosis	0	0	0	0

*Trial conducted in main swine barn at C. U., city water.

†Two replications combined. Rep. 1, five pigs per group, average in weight 43 lb. Rep. 2, four pigs per group, average in weight 43 lb.; Rep. 1 based on 27 days; Rep. 2 on 30 days.

**Significantly less than other rations ($P<0.01$).

Oregon Trade Show

PORTLAND, ORE.—The 11th annual Pacific Northwest Garden Supply & Outdoor Living Trade Show, sponsored by the Oregon Feed & Seed Dealers Assn., is rapidly nearing the sell-out stage, according to Wes Hamilton, general chairman, North Coast Seed Co., Portland. The annual event will be presented Oct. 24-25 in the new Portland Memorial Coliseum.

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Mississippi Group Takes Steps To Help Meet Broiler Problems By Encouraging Better Management

By Special Correspondent

FULTON, MISS.—What can broiler contractors and growers do in the face of recent depressed conditions in the poultry industry?

One thing that can help is to get at some of the basics in poultry management and try to do a still better, more efficient job of production.

This type of thing was conceived, planned and carried out recently in this area, with a special meeting held to encourage growers to use better management practices.

Some 400 persons attended the first annual Lee and Itawamba County Poultry Day, held at the Itawamba Junior College, with special emphasis on management at the grower level.

Planning for the meeting took place several weeks prior to the event. Because of difficult problems facing contractors and growers, all of the principal contractors in the area reviewed the situation. They agreed that possibly a better job could be done with additional or adequate equipment and an educational program to encourage more basic management practices. With these ideas in mind and with a firm agreement among contractors to set the specified equipment requirements as a base before putting out new contracts, plans were set in motion to present the information to growers.

John H. Todd of Dewitt's Hatchery was named program chairman, working with the Itawamba and Lee county agents' offices and A. T. Praybery of the Fulton FHA office as president and David Rushing, assistant Itawamba county agent, as secretary-treasurer. The committee obtained mailing lists, compiled capacity figures, mailed two letters to growers encouraging them to attend the meeting, arranged for speakers, planned the lunch and took pictures of farms.

Finally, the meeting was held, and it was termed a very successful event. Some 400 persons were on hand to hear suggestions from university and other experts.

Firms which helped and provided financial assistance which made the program possible were Bradshaw Mfg. Co., Canton, Ga.; Charles Burthardt, Pontotoc, Miss.; Dewitt's Hatchery, Tupelo, Miss.; Gray Bros. Feed Mill, Dorsey, Miss.; Gunners, Inc., Tupelo; Henderson Poultry Supply, Tupelo; Jamesway Mfg. Co., Ft. Atkinson, Wis.; Keiths Hatchery, Tupelo; Mississippi Broiler Supply, Tupelo; Purnells, Inc., Tupelo; Riverside Feed Mill, Pontotoc, Miss., and Sunshine Mills, Inc., Red Bay, Ala.

Management Practices

One of the speakers was Dr. E. J. Day, nutritionist at Mississippi State University, who told of basic management practices in relation to condemnation and profit. He emphasized that all should reconsider the basic fundamentals of efficient broiler production, including adequate housing and equipment, good chicks, the best feeds, adequate vaccination and sanitation programs and enough proper management — all of which can reduce costs and mean more money eventually to growers and contractors alike.

Dr. Day pointed out that in 1959 condemnations at processing plants cost the poultry industry $113 million. He mentioned several reasons for high condemnation rates and made certain suggestions.

Reasons for condemnations include:

(1) Lack of sufficient heat during brooding period, as well as supplemental heat in growing. It's better and cheaper to use fuel than feed.

(2) Use of poor quality chicks.

(3) Poor ventilation and house construction.

(4) Improper vaccination programs.

(5) Lack of proper sanitation measures.

(6) Lack of and untimely use of medications.

(7) Poor or no supervision from contractor level.

(8) Improper attention to management practices each day in the poultry house.

A few of the management practices that he talked about were:

(1) Clean waterers daily. He cautioned that a sanitizing agent won't take the place of cleaning.

(2) Don't dump water in the litter; this causes damp spots and is a source of trouble.

(3) Clean feeders as needed, not only of litter, but they, too, need washing occasionally.

(4) No visitors (diseases spread this way).

(5) Use shoe covering when entering houses, especially when different age birds are on the same farm.

(6) Keep out and use control measures for wild birds and rats.

(7) Provide a means for a sanitary disposal of all dead birds.

Dr. Day ended by saying that this area stands in the center of the greatest expansion area of the U.S., that cost of producing broilers is as low as anywhere and that the future looked bright, only if "we control our methods of production."

Paul Yount, Mississippi extension poultryman, pointed out that as of Oct. 1, Mississippi authorities would enforce regulations requiring poultry disposal pits. No one will be allowed to sell, process or pay anyone for any poultry or products who does not have a registration number, and this number is acquired only after official inspection and verification. A pamphlet illustrating suggested designs for disposal pits was given to all growers.

Contractors' Report

John Todd of Dewitt's Hatchery, Tupelo, Miss., gave the contractors' report. He said, in part: "Our failure or success affects everyone in our community. To be successful requires several things that we must try to attain. First, produce a quality product; second, keep our cost of production as low as possible; third, make a profit.

"Unfortunately, we have no control, directly, on the price that we receive for our product, but we can control quality and cost of production, only if we resolve to do a better job of management.

"Contractors in this area are very well aware of this fact and consequently have made a recommendation to growers that we begin at home and take inventory of the type and amount of equipment that we have on hand, realizing that with adequate

POULTRY MEETING SPEAKERS—Pictured here are two of the speakers who stressed better management at a special poultry meeting at Fulton, Miss. They are James (Red) Hill (left) and Dr. E. J. Day, both of Mississippi State University. Because of serious problems in the broiler industry, the meeting was held primarily to encourage growers to use better management practices.

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equipment and good management, our task will be much easier."

Equipment Recommendations

The group recommended the following minimum requirements for adequate equipment for economical production of broilers:

(1) 600-700 chicks under a 1,000 capacity brooder and proper installation of gas lines.

(2) 4-8 ft. automatic waterers per 1,000 birds, with proper distribution throughout house.

(3) Feed space per 1,000 birds (any of the following):

a. 1 line automatic feeders in houses 30-32 ft.

b. 2 lines automatic feeders in houses 34-48 ft.

c. 20 five-ft. large type broiler troughs.

d. 30 large type hanging feeders.

(4) 1 water jar per 100 chicks started and desirable use of brooder guards.

(5) Chicks will be placed on a basis of no more than 0.8 sq. ft., provided adequate equipment is available.

These requirements were described as the outcome of years of experience and hundreds of records covering various seasons with all types of equipment and management. They will change later as new methods develop.

Mr. Todd went on: ". . . It is my belief that we as individuals should cease to worry about the price and concentrate on the job we can do, remembering that if we are to have a low market such as we are now experiencing, for a great portion of the year, we must produce for less or be faced with the problem of failure."

Figures developed by the local committee showed that there are some 250 producers of broilers with a total floor space of 2,085,000 sq. ft. in the two counties. Of this some 830,000 sq. ft. of housing was erected during the past 12 months. This expansion represents a 30% increase in available broiler capacity.

At noon a barbeque chicken dinner was served. One of the speakers in the afternoon was James E. (Red) Hill, head of the Mississippi poultry department.

Insulation

He presented recommended building and insulation practices, noting that much more planning should go into housing than has been customary. He mentioned that narrow houses tend to be a little more efficient than the very wide ones, possibly because of ventilation and air movement across houses. It was noted that now houses should be built with the thought of conserving heat in the winter and opening them in the summer for air movement.

He said that he would not recommend that everyone rush out and buy insulation for houses. Research on insulation as a means of reducing costs and condemnations is encouraging, but more research is needed. He suggested that growers check with the contractor for whom they plan to grow and let the contractor make recommendations, since he is in a position to know the needs of a producer in his immediate area.

Outlook

Paul Yount spoke again in the evening on the poultry industry outlook in the area. He agreed that the industry was going through a trying situation, selling broilers for 4 or 5¢ per pound less than cost of production at the time of the meeting, but he observed that this situation would not last forever.

"It is true," he said, "that several of us won't be here when things get better, but that should be a lesson to all. We must tighten up and do the best job possible. . . . There is now and will be in the future a good return for a man's labor in proportion to his investment over a number of years, only if he is willing to do his best to produce a quality product at least cost."

Producers were urged to study photographs of poultry farms which were on display and to take note of equipment on display. During the day, eight prizes were given away.

MICROSCOPY MANUAL AVAILABLE

SPRINGFIELD, ILL. — A manual on feed microscopy is now available, according to A. W. Creswell, Illinois state feed microscopist.

The Illinois School for Feed Microscopists Manual, a complete loose-leaf booklet on the newest methods of feed microscopy, is available at a cost of $5.

Also available, at a cost of $25, is the manual and 10 check samples reviewing the material given in the manual, the samples to be reported periodically in 1961-62.

Persons interested should contact A. W. Creswell, 2028 N. 20th St., Springfield, Ill.

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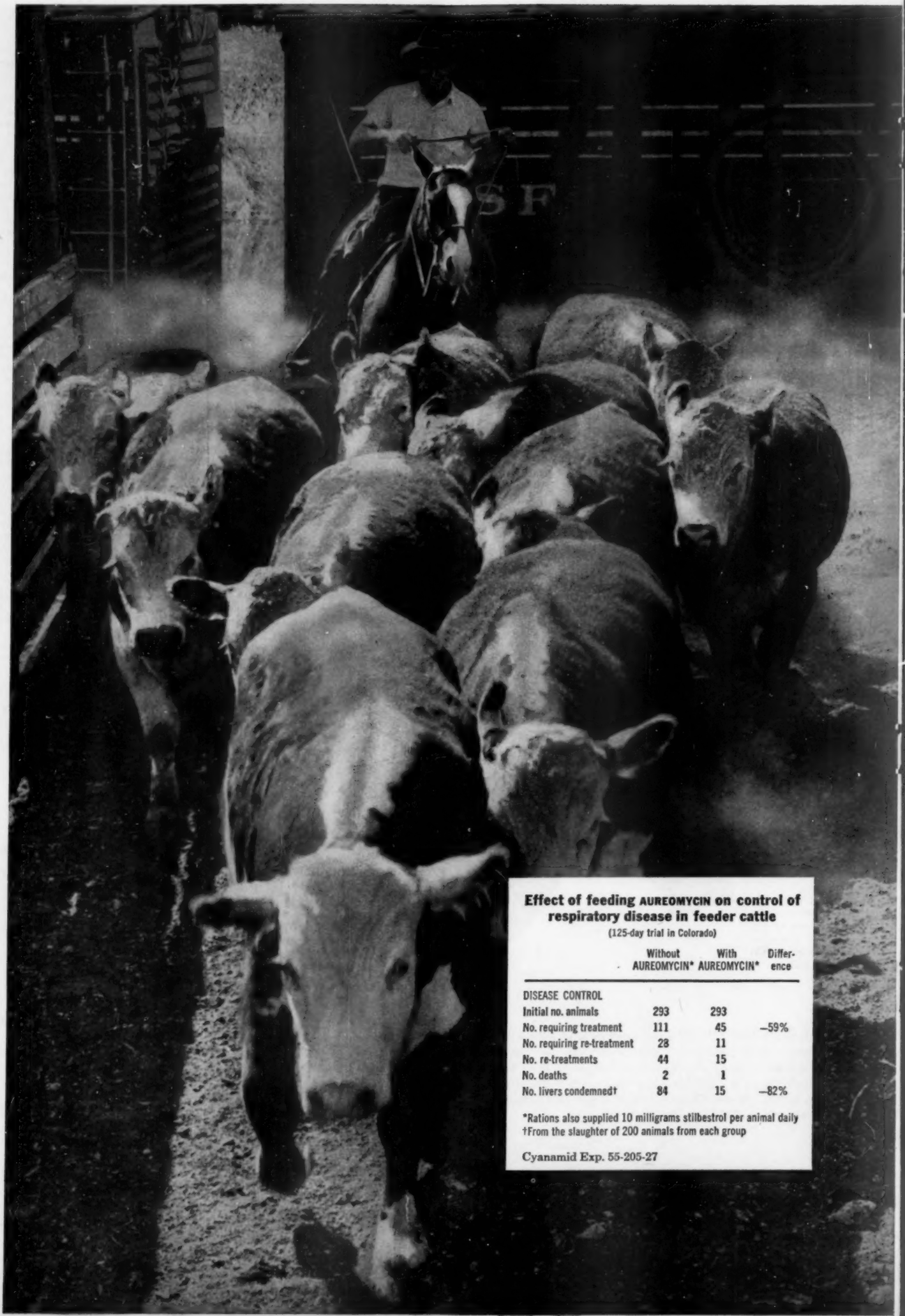
One of the country's oldest and largest manufacturers of vitamin and trace mineral products.



Effect of feeding AUREOMYCIN on control of respiratory disease in feeder cattle

(125-day trial in Colorado)

	Without AUREOMYCIN*	With AUREOMYCIN*	Difference
DISEASE CONTROL			
Initial no. animals	293	293	
No. requiring treatment	111	45	–59%
No. requiring re-treatment	28	11	
No. re-treatments	44	15	
No. deaths	2	1	
No. livers condemned†	84	15	–82%

*Rations also supplied 10 milligrams stilbestrol per animal daily
†From the slaughter of 200 animals from each group

Cyanamid Exp. 55-205-27

HOW TO CUT LOSSES FROM SHIPPING FEVER WITH AUREOMYCIN IN STRESS FEEDS

When you provide formula feeds containing high levels of Aureomycin, you're supplying your cattle feeders with today's most effective way to prevent setbacks from stress of shipping, unloading, weather changes

Stress feeding with high levels of AUREOMYCIN® for all newly-arrived cattle — that's the protective, money-making measure more and more farm feeders and commercial feedlot operators are taking.

As a result, many feed manufacturers formulating these stress feeds are discovering a new and profitable source of income.

First few weeks critical period

Those first two or three weeks following the arrival of cattle are critical. Shipping leads to stress. Unloading and sorting add new stress. Changes in surroundings or in weather — new feeds and feeding methods — add still more stress.

Stress often brings on shipping fever, bacterial diarrhea, foot rot, secondary bacterial infections, subclinical or invisible diseases.

Stop losses for your customers

Stress feeds with AUREOMYCIN help minimize losses from these diseases. Provide your customers with feeds that will give 350 milligrams of AUREOMYCIN per head per day — *to be fed until the critical period is past.* No antibiotic, chemobiotic, drug or hormone equals AUREOMYCIN in its activity against disease. Cattle getting stress levels of AUREOMYCIN *every* day come through the critical period strong and vigorous — go on full feed quickly. After the critical period, cattle can be continued all the way to market on feeds that provide 70 milligrams of AUREOMYCIN per head per day. This will keep them healthy and making economical gains.

Value of AUREOMYCIN in the ration of fattening cattle
(86-day trial in Nebraska)

	Without AUREOMYCIN*	With AUREOMYCIN*	Benefits from AUREOMYCIN
Number of cattle	205	208	
Average initial weight (lb.)	846	859	
Average final weight (lb.)	1163	1195	
Average gain per steer (lb.)	317	336	19 lb. extra
Average daily gain (lb.)	3.66	3.88	0.22 lb. more
Feed per cwt. gain (lb.)	760	690	9.2% less feed
Cost per cwt. gain (feed, labor, etc.)	$19.18	$18.27	$0.91 less cost
Extra return per head	—	—	$4.26

*Rations also supplied 10 milligrams stilbestrol per head daily

Cyanamid Exp. 56-200D-7

Shown above are the results of an experiment with AUREOMYCIN in the ration of fattening cattle. In this trial, AUREOMYCIN was fed to one group of cattle at the rate of 350 milligrams per head per day for the first 30 days followed by 70 milligrams per head per day for the remainder of the trial. Note these significant advantages with AUREOMYCIN: (1) increased average daily gain by 0.22 pound (19 pounds in 86 days); (2) improved feed conversion by 9.2%; (3) reduced feed cost 91¢ per 100 pounds of gain; (4) gave an extra return of $4.26 per head. In addition, AUREOMYCIN reduced the incidence of shipping fever, pneumonia and rhinotracheitis. Cattle fed AUREOMYCIN were more uniform, had better bloom.

Aureomycin prevents shipping fever

In the table shown on the opposite page, you can see the effectiveness of AUREOMYCIN in controlling respiratory diseases in cattle. In this experiment AUREOMYCIN was fed at the rate of 350 milligrams per head daily for 7 days, followed by feeding 70 milligrams per head for the remainder of the experiment. Note the high reduction (59%) in the number requiring treatment in the group fed AUREOMYCIN. This lot produced over 7,000 extra pounds of beef!

Recommend stress feeding

If you are not now making a stress feed containing high levels of AUREOMYCIN for feeder cattle, plan to do so. There's extra profit in such feeds for your feeders — and extra sales volume for you through increased customer satisfaction. Complete details on stress feeds containing AUREOMYCIN are given in a new booklet, "How to Build Bigger Beef Profits." This booklet is for distribution to your customers. For your copies get in touch with your Cyanamid representative or write direct to American Cyanamid Company, Agricultural Division, Princeton, N. J. ®*AUREOMYCIN is American Cyanamid Company's trademark for chlortetracycline.*

The label instructions on Cyanamid products, and on products containing Cyanamid ingredients, are the result of years of research and have been accepted by Federal and/or State Governments. Always read the labels and carefully follow directions for use.

CYANAMID
AUREOMYCIN
IN FORMULA FEEDS

CYANAMID SERVES THE MAN WHO MAKES A BUSINESS OF AGRICULTURE

Receipts and Selected Costs per 1,000 broilers for Five Groups of Various Sizes and Levels of Integration, 1958

Group	Receipts	Selected expenses: Chicks	Feed*	Total expenses	Receipts less expenses
1. Medium size—low degree of integration	$747	$144	$449	$593	$154
2. Large size—low degree of integration	734	141	442	583	151
3. Small size—high degree of integration ...	753	153	467	620	133
4. Medium size—high degree of integration ...	751	146	432	578	173
5. Large size—high degree of integration ...	745	144	413	557	188

*Includes medication.

Efficiency Seen as Key to Contracting Future

CORVALLIS, ORE. — It is concluded in an Oregon State University bulletin that contract production in agriculture will remain an important method of coordinating production and marketing "so long as prospects for greater efficiency in use of resources exist for most of the arrangement's participants."

This statement is made by Lynn H. Davis and Gerald E. Korzan, Oregon State University agricultural economists in "Study and Prospects of Contract Farming in Oregon," an extension bulletin which analyzes Oregon's broiler industry and discusses prospects for growth of integration in other poultry and livestock industries—commercial laying flocks, turkey growing, swine fattening, cattle fattening and lamb fattening.

The Oregon specialists believe the livestock, egg and turkey industries will experience increased contract production, but the increase will be at a much slower rate than in broiler production, unless changes occur faster than expected.

They reason that contract production has seen its greatest expansion in the broiler industry because broilers require a relatively short time to reach market weight, broiler production has become greatly specialized, credit for broiler growing has been "more readily available from regular lending agencies" and new advances resulting from research have occurred rapidly in all phases of the broiler industry.

Summary of Study

The following summary and conclusions of the Oregon contract farming study were excerpted from Station Bulletin 580, June, 1961:

Production and market organization in an industry is a result of economic forces. In broiler production, the environment has encouraged production by contract. Specialization of various phases of production and marketing—a result of new technological developments—has made these functions dependent on each other. Decisions by firms in one part of the industry have a direct impact on other firms. Lack of coordination between production and marketing phases results in lower profits for the firms. Contract production has scheduled production among firms.

No regular increase or decrease in average production efficiency was found in the growing phase of broiler production because of size of business or amount of integration. Single broiler businesses may have gains or losses in production efficiency regardless of contracts. Evidently the lower limit placed on size of business in this study was high enough to enable broiler growers to use efficient production methods. The ability of the grower to recognize improved production methods by himself or with the help of fieldmen, extension personnel, or others makes a greater difference in production efficiency than signing a contract.

Prices of supplies used in broiler growing go down as size of enterprise goes up. Quantity discounts on feed—savings brought about by bulk handling—result in lower prices for bigger businesses. Small enterprises are faced with increasing competition from larger enterprises which are expanding at a faster rate than the small businesses.

Risks Shifted

Broiler firms produce under contract in order to shift some risks of production to other firms in the industry. When the outlook is for low prices, growers sign contracts more readily. Some firms that have produced independently shift to contract production at such times. A tendency for continued low prices for broilers has resulted in a shift of most growers to some form of contract production.

Contract production in other livestock and poultry businesses will probably increase. However, unless changes occur faster than at present, other contract business will increase at a much slower rate than in the field of broiler production. Whether or not the trend toward contract production will continue and the speed with which arrangements develop will depend on changes that occur in these industries. Changes will not, of course, occur in all industries at the same time.

Modern broiler production is a new industry and has experienced rapid growth and change. Established market organization and methods have not deterred growth and rate of change as much as will probably be the case for better established industries. New advances as a result of research have occurred at a rapid pace in all phases of the broiler industry (partly because of contract production) but in other industries production methods have remained about the same. Production in other industries requires a longer time and products may be stored to reduce price variation. Specialization of farm phases of production has not been as great in other industries as it has been in the broiler industry. Thus some situations that have encouraged broiler production by contract have not been present in other industries. For example, credit has been more readily available from regular lending agencies since feed supplies from crop enterprises or other assets could be used as security for obtaining credit.

Contract production will remain as an important method of coordinating production and marketing so long as prospects for greater efficiency in use of resources exist for most of those participating in the arrangement.

Grain INSECTS Stopped the ECONOMICAL WAY!

"PERFECT PARTNERS!"

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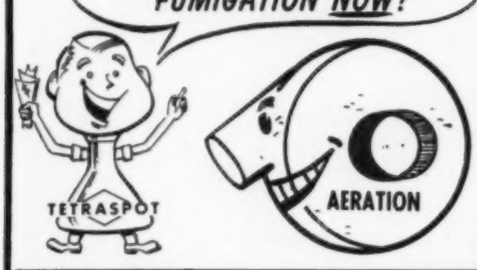
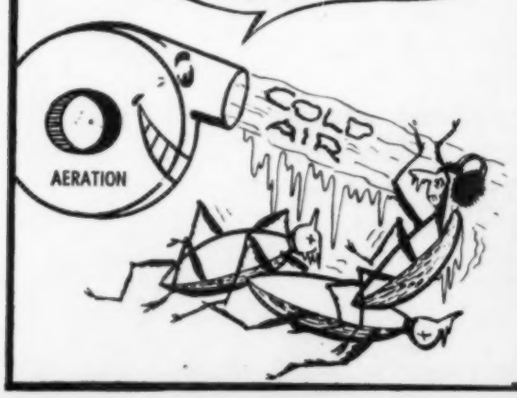


I'LL HOLD 'EM DOWN TILL COOL WEATHER...

GOOD WORK, PARTNER!

DOUGLAS TETRASPOT CONTROLS LOCAL INFESTATION — SPOT OR SURFACE

...THEN I'LL "KNOCK 'EM COLD" FREE!



ASK your DOUGLAS Man how you can save money by using TETRASPOT to control spot and surface insect infestation. With TETRASPOT you don't pay good money to fumigate un-infested grain.

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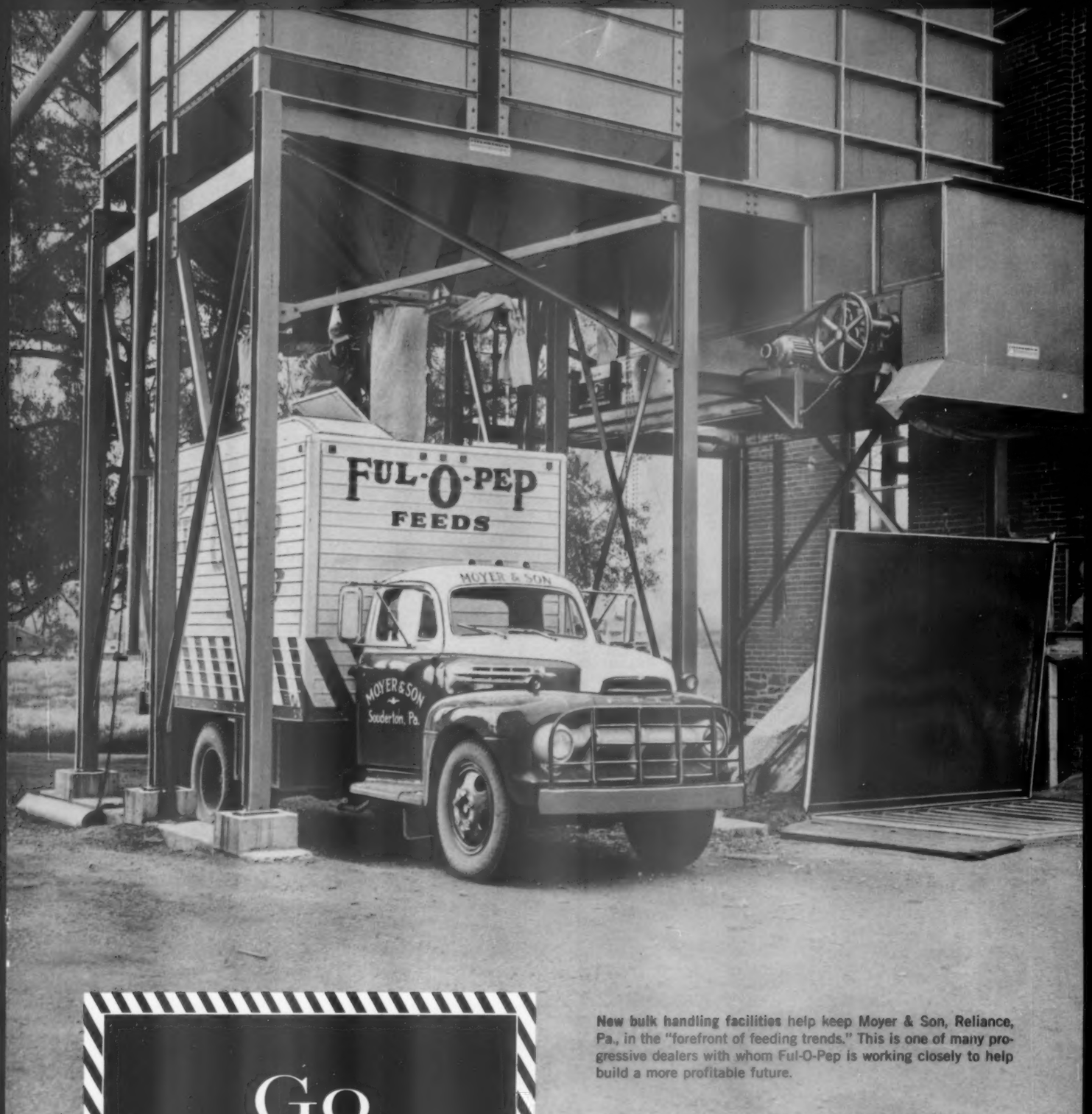
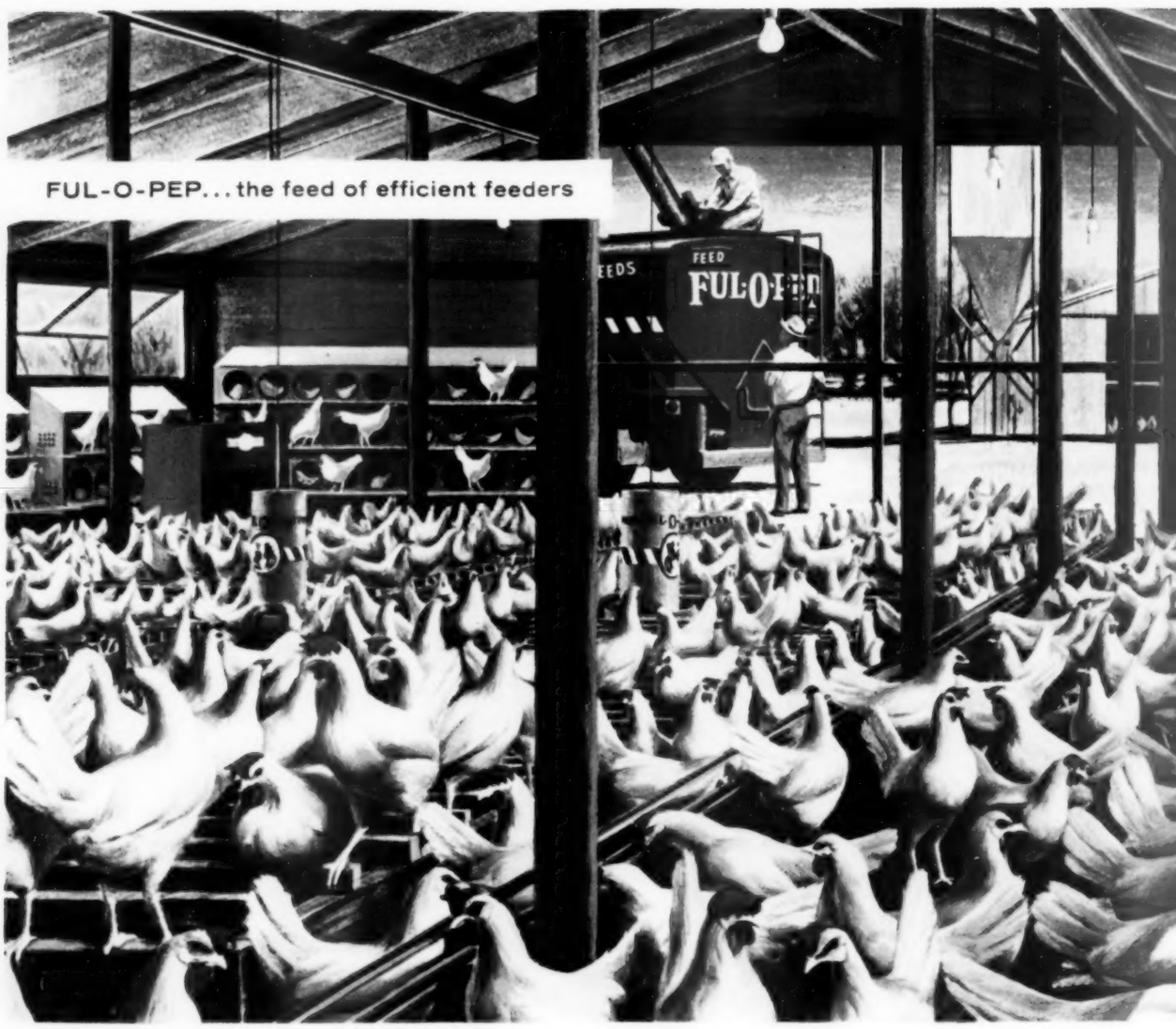


New bulk handling facilities help keep Moyer & Son, Reliance, Pa., in the "forefront of feeding trends." This is one of many progressive dealers with whom Ful-O-Pep is working closely to help build a more profitable future.

Go and Grow with FUL-O-PEP

As a Ful-O-Pep dealer, you can offer a complete line of high-efficiency feeds . . . formulated to meet the exacting needs of today's business-minded feeders. Further, forward-looking Ful-O-Pep helps you keep abreast of modern feeding trends with a sound bulk and grind-mixing program. As a real "partner in progress," you can depend on Ful-O-Pep to back you all the way for future growth!

HERE'S HOW FUL-O-PEP HELPS DEALERS SELL TODAY'S TOP FEEDERS →

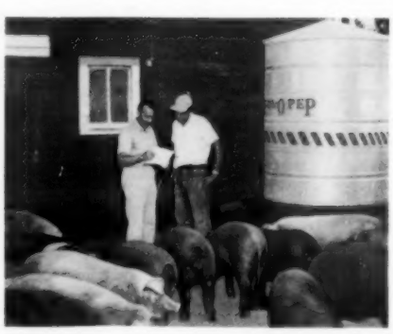


Whatever livestock you feed...

Today's big goal:

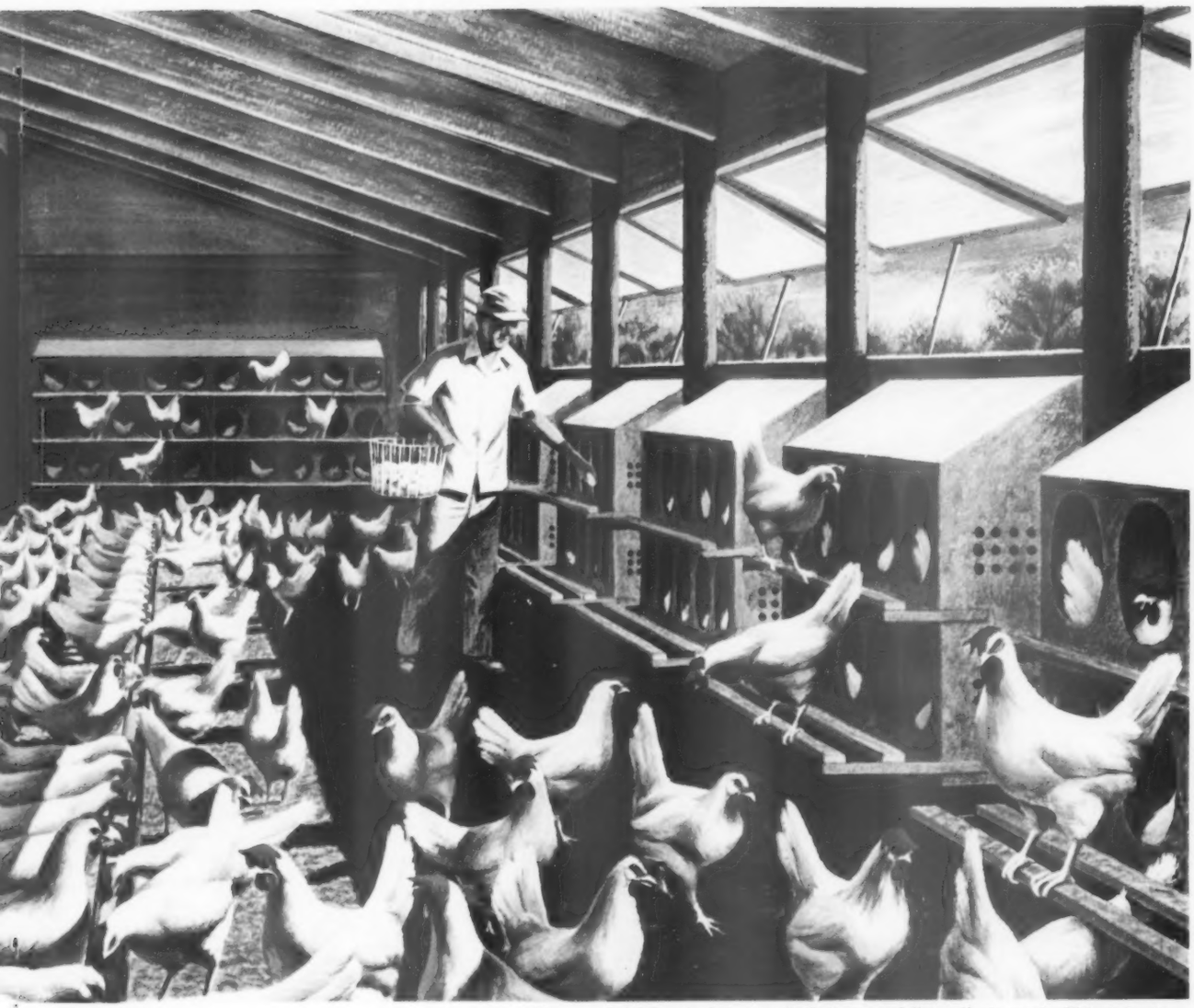
Your Ful-O-Pep dealer keeps pace with changing needs...

Management help—Your local dealer is backed completely by a team of Ful-O-Pep nutritionists, researchers, and livestock specialists—all of national reputation. He can help you keep up-to-date on new practices.



Top economy—Your Ful-O-Pep dealer offers high-efficiency supplements, concentrates, and complete rations—some with special ingredients—to meet every need. He'll gladly help figure your most economical program.

Prompt service—Depending on local needs, your Ful-O-Pep dealer provides many modern services—grinding, mixing, bulk handling, grain bank, others. Call on him for prompt help. His business is to serve your business.



Wherever Ful-O-Pep is fed . . . you'll find some of the nation's most efficient feeders.

Higher feeding efficiency

It only takes a small increase in pounds gain or dozen eggs *per ton of feed* . . . to make a big increase in profit margins. That's why business-minded feeders constantly strive to step up their feeding efficiency.

Take egg producers, for example. Many have reduced their average feed conversion to a dozen eggs on 3.7 lbs. Ful-O-Pep – or better. By saving as little as .4 lbs. feed per dozen, they get 52 *extra dozen eggs per ton* . . . 52 extra profit dozens!

Today, more and more of the nation's top producers look to Ful-O-Pep efficiency – and Ful-O-Pep's progress in better nutrition – to give them the "edge" on modern feeding needs.

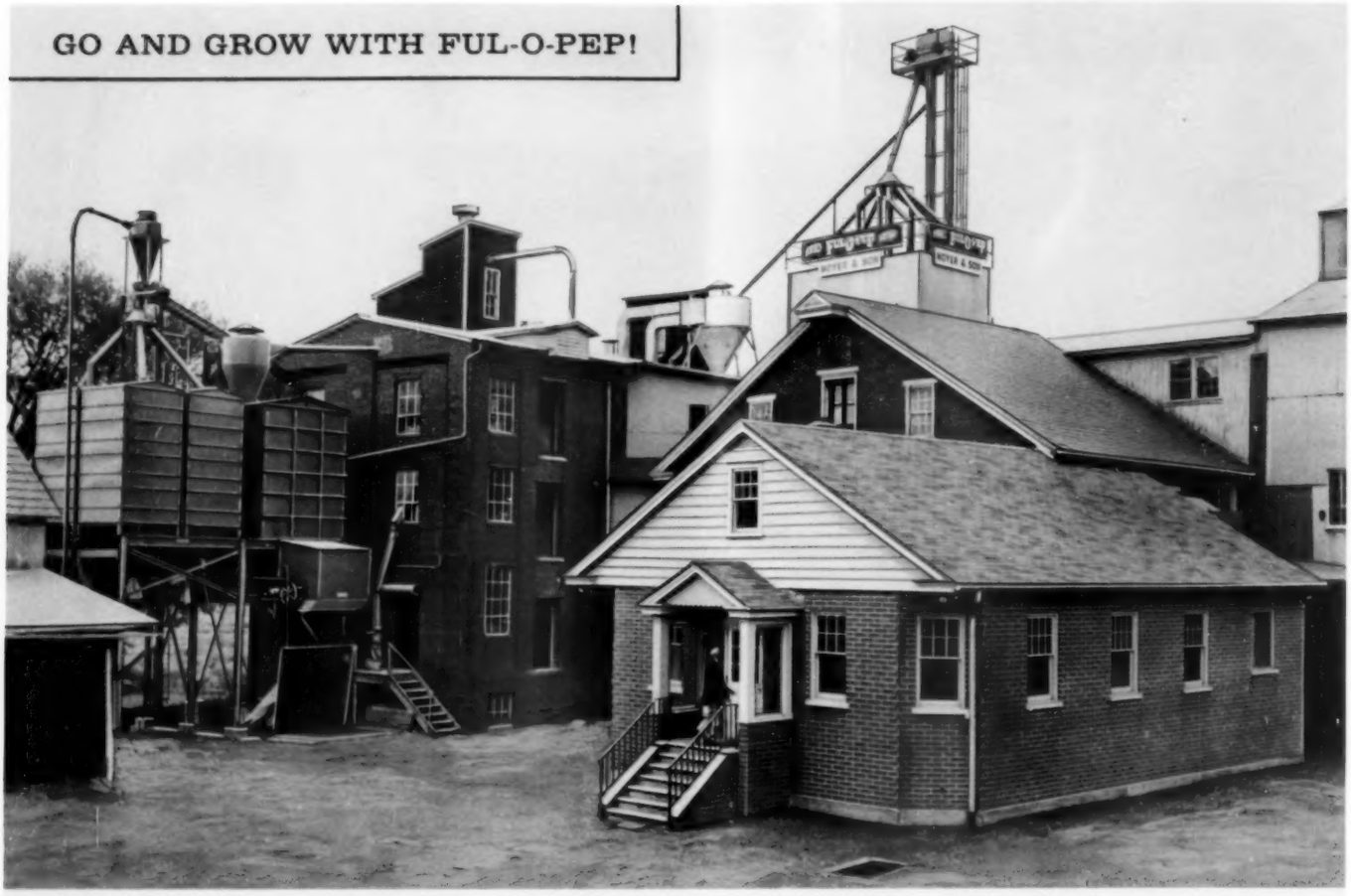
Talk to your Ful-O-Pep dealer. Talk efficiency. Talk economy. Talk profits. That's his language. Whether you produce meat, milk or eggs . . . you can be a more efficient feeder with Ful-O-Pep.

MADE AND BACKED BY THE QUAKER OATS COMPANY

FUL-O-PEP

HERE'S HOW FUL-O-PEP HELPS DEALERS BUILD FOR THE FUTURE →

GO AND GROW WITH FUL-O-PEP!



"Yes, more and more of our customers are turning to bulk," said Lester Clemmer, partner. "And now we're geared to serve them—efficiently." At one time, bags were slung up to the fourth floor one at a time on a rope and pulley sling. Now, an undertrack screw and elevator is used. Bulk bins provide storage for 100 tons of Ful-O-Pep concentrates, and 44 tons of mixed feed. Moyer & Son maintain one bulk truck for on-farm delivery.

"Our bulk sales increasing

...we're 70 years old and still growing!"

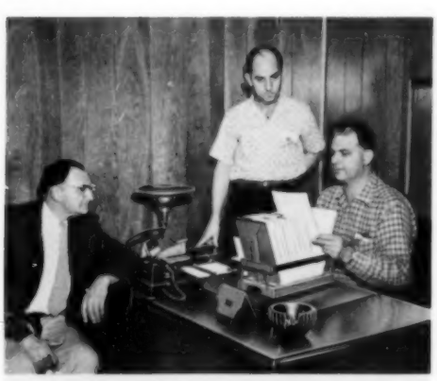
—says Moyer & Son, Reliance, Pa.

"Even though we've been in business 70 years, our new bulk facilities put us right up front with modern feeding trends," said Nelson Moyer of Moyer & Son, Reliance, Pa. "It's too early to tell how much our increase in tonnage will be," he continued. "But we feel certain bulk handling will help us step up total sales."

"Quaker gave us every possible assistance in setting up our new bulk installation," Jacob Moyer, one of the partners, said. "But they didn't stop there. Ful-O-Pep resale men are going right out to the field to help us bring in business."

GO AND GROW WITH FUL-O-PEP! *For information on how Ful-O-Pep can help you build for the future, write: Feed Sales Manager, The Quaker Oats Company, Merchandise Mart, Chicago 54, Illinois.*

Bulk cut handling costs substantially, for Moyer & Son... and customers like the savings they make in lower feed prices. It's a strong appeal for selling new prospects, they say.



Third generation for Moyer & Son, and Ful-O-Pep dealers for 40 years... they're still growing! Partners, and first cousins, are (left to right): Lester Clemmer, Jacob Moyer, and Nelson Moyer.

Grind-mixing service has been available for several years. Ful-O-Pep Layer Concentrate and Ful-O-Pep Super Milking 32 are extremely popular with customers, who keep coming back again and again.

FUL-O-PEP

MADE BY THE QUAKER OATS COMPANY

SERVICE SCHOOL—Geerlings Feed Mills, Inc., Waterloo, Iowa, has opened a new service school at its research farm at Denver, Iowa. Purpose of the school is to give Geerlings' dealers and salesmen latest information on livestock and poultry management. The school deals mainly with service and nutrition. After satisfactory completion of 10 classes, a diploma will be awarded. Geerlings Feed Mills plans to open the school to feeders. Joseph M. Henchal, Geerlings service director, is in charge of the school. He is shown here conducting a class for a group of dealers and salesmen.

Engineering Data To Be Shared at Chicago Dec. 13

KANSAS CITY — Technical engineering information of interest to the grain and feed industries will be shared by the Grain Processing Machinery Manufacturers Assn. and the American Society of Agricultural Engineers when they stage a special one-day joint program during the Dec. 13-15 winter meeting of ASAE at the Palmer House in Chicago.

This joint effort to "establish a regular means of sharing basic information and discussing mutual problems" was announced during the Sept. 11-14 Feed Production School in Kansas City by Dr. Harry Pfost, professor in the department of flour and feed milling at Kansas State University and chairman of the ASAE technical committee on grain and feed processing and storage, and by C. Robert Myers, president, GPMMA.

"The opportunity to share technical engineering knowledge with these specialists will be most beneficial to our association and others in the grain and feed industries," Mr. Myers said. "Rapid advancement in the technology of feed formulation, for example, is just one area which requires a scientific approach to the new problems."

The ASAE-GPMMA cooperative sessions are scheduled for Dec. 13. Grain storage is the general theme for the morning talks and discussions and feed processing will be covered in the afternoon. Dr. Pfost will preside over the morning period and H. J. Barre, Mansfield, Ohio, consulting engineer, will be in charge of the afternoon session.

Morning Program

The morning schedule of talks and speakers looks like this:

Opportunity Is Knocking Louder—G. A. Karstens, vice president and publication director, Feed Age magazine, Chicago.

Commercial Grain Storage Design—Milt C. Bondus, general superintendent, terminal elevator department, Cargill, Inc., Minneapolis.

Moisture Content, Storage Molds and Grain Quality—Clyde M. Christensen, professor of plant pathology, University of Minnesota.

What Agricultural Engineers Can Do for the Wet and Dry Corn Milling Industry—W. R. Wichser, manager, milling development, research laboratories, The Quaker Oats Co., Barrington, Ill.

Drying Corn for the Commercial Market—G. H. Foster, agricultural engineer, Agricultural Marketing Service, U.S. Department of Agriculture, Lafayette, Ind.

Flow of Granular Materials in Bins—Art W. Stegner, bulk storage products manager, and Alan Cook, product research department, Butler Manufacturing Co., Kansas City.

Afternoon Program

The feed processing portion of the program is to include:

The Structure of Grain Kernels and Its Importance to Engineers—Majel M. MacMasters, department of flour and feed milling industries, Kansas State University.

Feed Mixing and Segregation Problems—Robert C. Wornick, agricultural development department, Chas. Pfizer & Co., Inc., Terre Haute, Ind.

Design of Feed Plant for Producing Feed for Nutrition Research—T. E. Stivers, T. E. Stivers Co., Decatur, Ga.

The Need for Equipment and Test Standards for Processing Machinery—Ralph Williams, president, B. F. Gump Co., Chicago, and George Thomas, president, Prater Pulverizer Co., Chicago.

Production Organization for Specification Products—Loren V. Burns, vice president, Mel Miller & Co., Kansas City.

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FOR INSTANT REPAIR OF CANVAS, DUCKS, TENTS, AWNINGS, TARPAULINS, RUGS, ETC.
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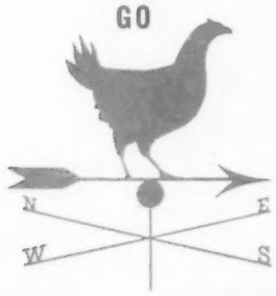
WITH...
TEHR-GREEZE FABRIC CEMENT
In Handy Applicator Bottle. Repairs Anything It Can Penetrate. Waterproof. Dries in 30 Seconds. Used On All Types Leather.
VAL-A COMPANY
700-710 W. ROOT ST., CHICAGO, ILL.

EVERYWHERE YOU GO



POULTRYMEN PICK

PILOT BRAND OYSTER SHELL

Coast-to-coast PILOT BRAND is a best-seller every month in the year. That's because this ideal eggshell material is tried, tested, proved. It definitely helps poultrymen get top production of stronger shelled eggs—the kind that bring highest prices in the market.

This universal demand for PILOT BRAND means that you can always count on steady sales, fast turnovers, good profits. And we help to keep customers coming your way with consistent advertising in leading farm and poultry publications and on more than 70 radio stations.

It pays BIG to stock, display, promote PILOT BRAND Oyster Shell—the largest selling eggshell material in the world.

PILOT BRAND OYSTER SHELL FOR POULTRY

Oyster Shell Products Company
Subsidiary of Southern Industries Corporation
Mobile, Alabama

FEEDSTUFFS
LEADER IN THE FIELD

Why... Wenger Coolers?

Wenger Horizontal Coolers stand apart from all the rest. The refinements found in a Wenger Cooler come only through extensive tooling which is only possible with Wenger's high volume production. For this reason Wenger builds and sells more horizontal coolers than any other manufacturer on the market—at any price.

Wenger set the horizontal cooler standards years ago, and these are the standards others have tried to imitate. As a result, the horizontal cooler is synonomous with the name Wenger, and the Wenger cooling principle is accepted as the most efficient means of pellet cooling and drying.

From the smallest to the largest, Wenger furnishes most of the horizontal pellet cooling systems in the world today.

Wenger

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Send information on your Horizontal Pellet Coolers immediately. General requirements as follows:

Type Feed _____

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Also interested in your Multi-Duty Pellet Mill _____

Shakers _____ Molasses Mixer _____

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Batch Mixer _____ Liquid System _____

NAME _____

FIRM _____

ADDRESS _____

CITY _____ STATE _____

New Plant Improves Efficiency, Helps Step Up Business

By Special Correspondent

"There is nothing that we can't do and aren't doing in this plant."

That's the way Milton Baldwin, general manager, described the operation of the new $200,000 feed mill of the Farmers Mercantile Co. at Red Oak, Iowa.

The mill, which is a push-button, automatic operation, began operating earlier this year. Prior to completion of the plant, officials indicated, the cooperative's feed division was hampered by the restrictions inherent in a small mill built in 1948. The old mill building is now used to store bagged feeds manufactured in the new plant. Feed business was stepped up sharply as a result of the building of the new mill, Mr. Baldwin indicated.

He said that the prime purpose in building the mill was to get more efficient and more competitive and provide better service to farmers. It was noted that previously, the firm was limited on custom grinding and mixing work, could not buy materials or sell feed in bulk and did not have modern molasses mixing and other facilities.

With the new storage handling facilities and with the electric controls over operations, efficiency has improved greatly, and it was indicated that feed can now be produced with only one twelfth of a man-hour per ton.

Capacity of the mill is listed at some 100 tons per eight-hour day, far greater than previously.

The new facility was designed and built by Mid-States Construction Co., Omaha. This firm also built the co-op's fertilizer plant.

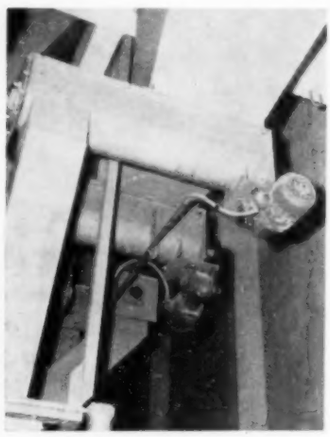
The feed plant has outside measurements of 42 by 59 ft. The top of the reinforced concrete structure is 88 ft. from ground level and 100 ft. above the basement slab.

The plant has two covered truck drives separated by a dock. The outer drive includes a 60 ft., 50-ton truck scale. Above the drive is an enclosure which holds molasses blending equipment for addition of molasses to feed being loaded out.

Beneath the inner drive are two truck dumping pits, two 5,400-gal. tanks for molasses and fats and the electrical and boiler rooms.

On the side of the mill opposite the truck drives is the railroad track. In addition to rail receiving, there is a spout over the track for rail car loading of bulk material from bins inside the mill.

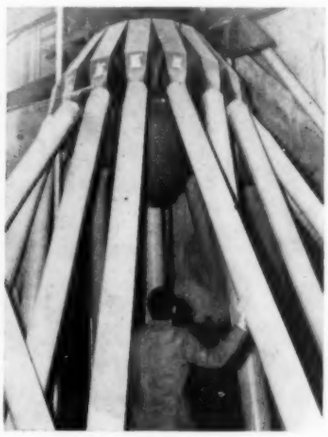
Ear corn or whole grains may be



Some of the feeder conveyors from 12 bins to the hopper scale. Troughs and end plates can be dropped, giving access to flighting for cleaning and maintenance.

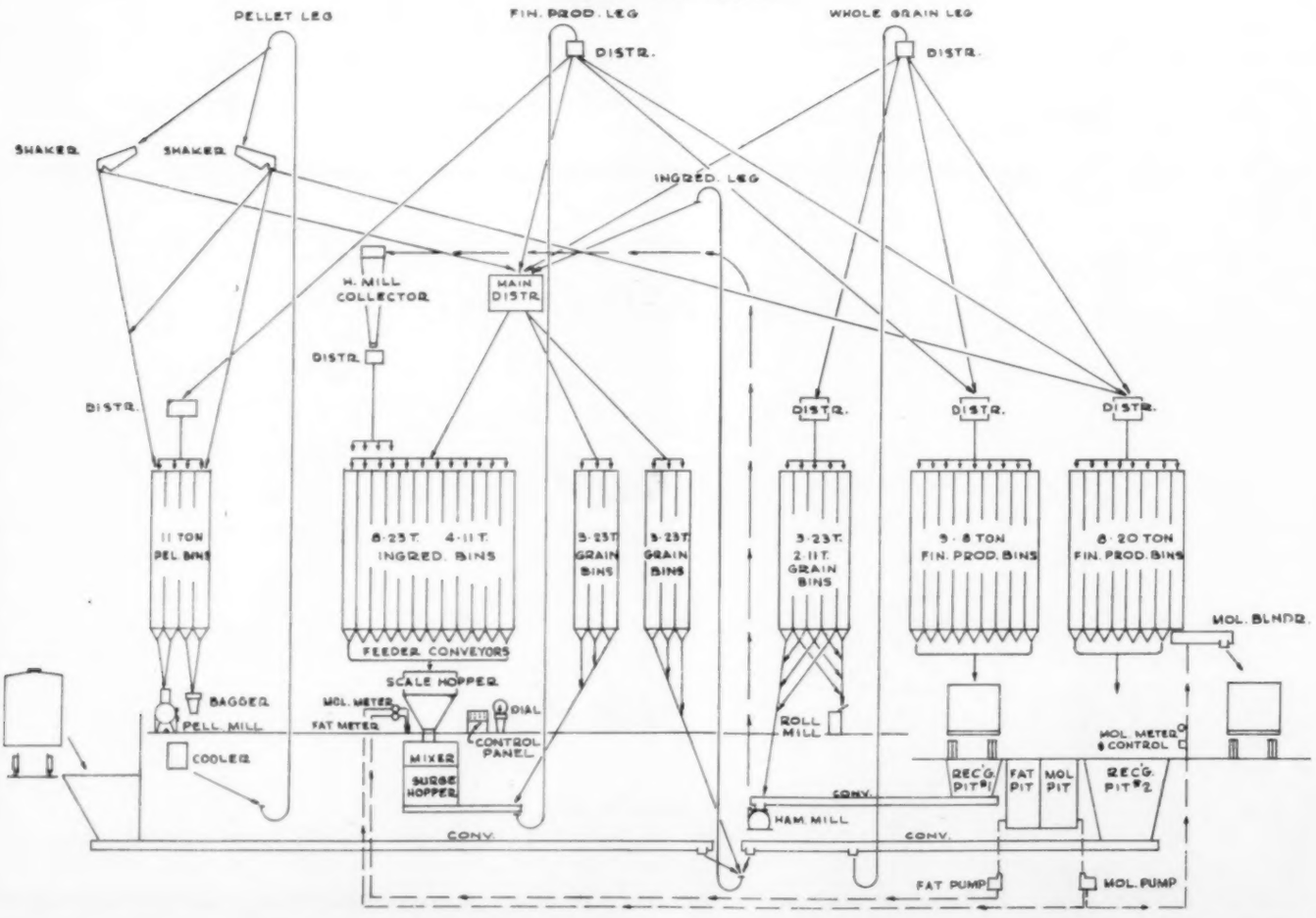
Lawrence Bennett, mill foreman, at the electrical console handling batching and mixing operations at the Farmers Mercantile mill. Pushing labeled buttons on the panel, the operator controls flow of bulk ingredients from 12 work bins above the 5,000-lb. hopper scale, partially in view in the background. The buttons activate the 9-in. screw feeder conveyors. The pelleting control panel is near this main control panel.

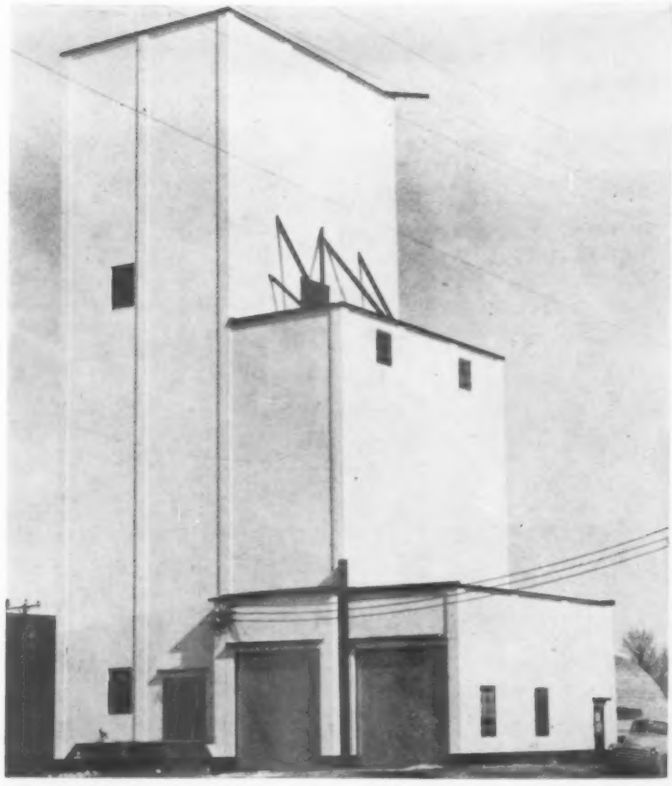
The grain processing facilities in the new plant include a Roskamp roller mill.



At the top of the mill is this Roto-flo distributor for distribution of materials to the plant's bins.

Simplified Flow Diagram





The new $200,000 feed plant of the Farmers Mercantile Co. at Red Oak, Iowa. The push-button operation has a capacity of some 100 tons per eight-hour day. The mill was designed and built by the Mid-States Construction Co.

moved directly to the 100 h.p. Bryant hammermill in the basement with a 12-in screw conveyor from one truck pit. A Dracon conveyor carries meal ingredients and grain from the other truck pit to the whole grain or ingredient leg for elevation and distribution through distributors into the various bins. A 9-in. screw conveyor links the rail pit to the legs. In addition to the hammermill, there is a Roskamp roller mill for rolling grain.

The plant has four legs for elevation of ingredients and finished feeds. The Puritan grain, meal and mixed feed legs have a 2,000-bu. hourly capacity. The Universal pellet leg has a 700-bu. capacity.

For batching and mixing, there is an electric push-button control panel. The panel controls flow of ingredients from 12 bins via screw feeders into the 5,000-lb. hopper scale. The main panel was designed and installed by Mid-States, using Square-D controls. Nine-inch feeder conveyors move the ingredients to the batching scale. The trough and end plate on each conveyor can be dismantled by removing exposed bolts, giving easy access to the flighting for cleaning and repair.

For mixing, a Marion mixer is used. One motor of 30 h.p. is used to operate the mixer and surge bin discharge, with the surge bin conveyor chain driven from the mixer shaft. The surge bin conveyor is kept discharging to the mixed feed leg while mixing of another batch is in progress.

The plant's controls are interlocked so that all units in a sequence will stop in case of trouble.

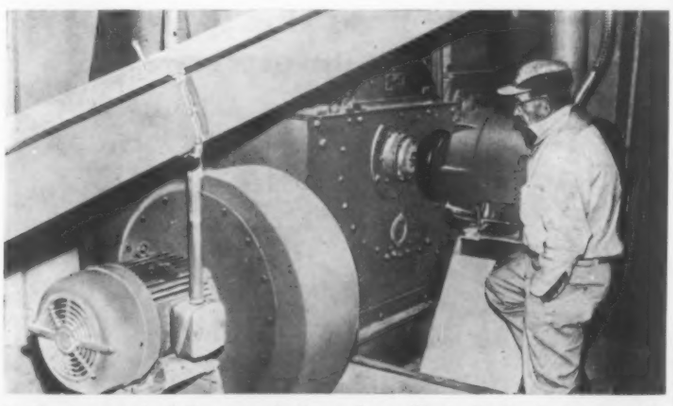
Pelleting is done with a 30 h.p. California mill transferred from the old plant. Wiring and controls for a 100 h.p. pellet mill also were installed.

Molasses may be added at the pellet mill. For cooling a vertical unit is used. After scalping, the pellets or crumbles are routed to sacking bins over the workroom floor, each served by a rail-mounted sacking machine, or are directed to bulk load-out bins over the drive.

The manager pointed out that the designers followed closely the recommendations of insuring agencies, and he said that the insurance rate is very favorable.

The new plant has helped considerably in stepping up business of Farmers Mercantile, officials said. To aid in the sales program, the organization put two salesmen out into the field "to push the market."

This cooperative has some 1,450 members in Montgomery County, Iowa. In addition to feed, the firm handles petroleum products, fertilizer (the co-op has a new blending plant near the feed mill), farm equipment, seeds, grain storage, hardware and other farm supplies.



In the basement of the new plant, employee Harry Justice looks over the 100 h.p. Bryant hammermill and 50 h.p. blower. A conveyor from the truck dump runs over the machinery.

HERE'S MORE PROOF . . . *Calves grow fast on* CALVITA VEALER

CALVITA VEALER . . . the sensational new product which is making veal calves profitable for dairymen . . . is proving its amazing growing power in every possible test. The authentic picture sequence below graphically proves how CALVITA VEALER produces fat, top quality calves **fast!**

There's nothing else like it!

STARTED ON CALVITA VEALER WHEN 5 DAYS OLD

AFTER 4 WEEKS ON CALVITA VEALER

AFTER 8 WEEKS ON CALVITA VEALER

A nice profit for the grower

On a nine-week CALVITA VEALER feeding program, bull calves are averaging better than 100 lbs. gain . . . **some as high as 150 lbs.!** Carefully kept records on scores of Holstein bull calves fed on CALVITA VEALER and a good commercial calf starter show an average net profit **above feeding costs** of better than $40 per calf. **Not a single drop of marketable whole milk is fed to the calf!**

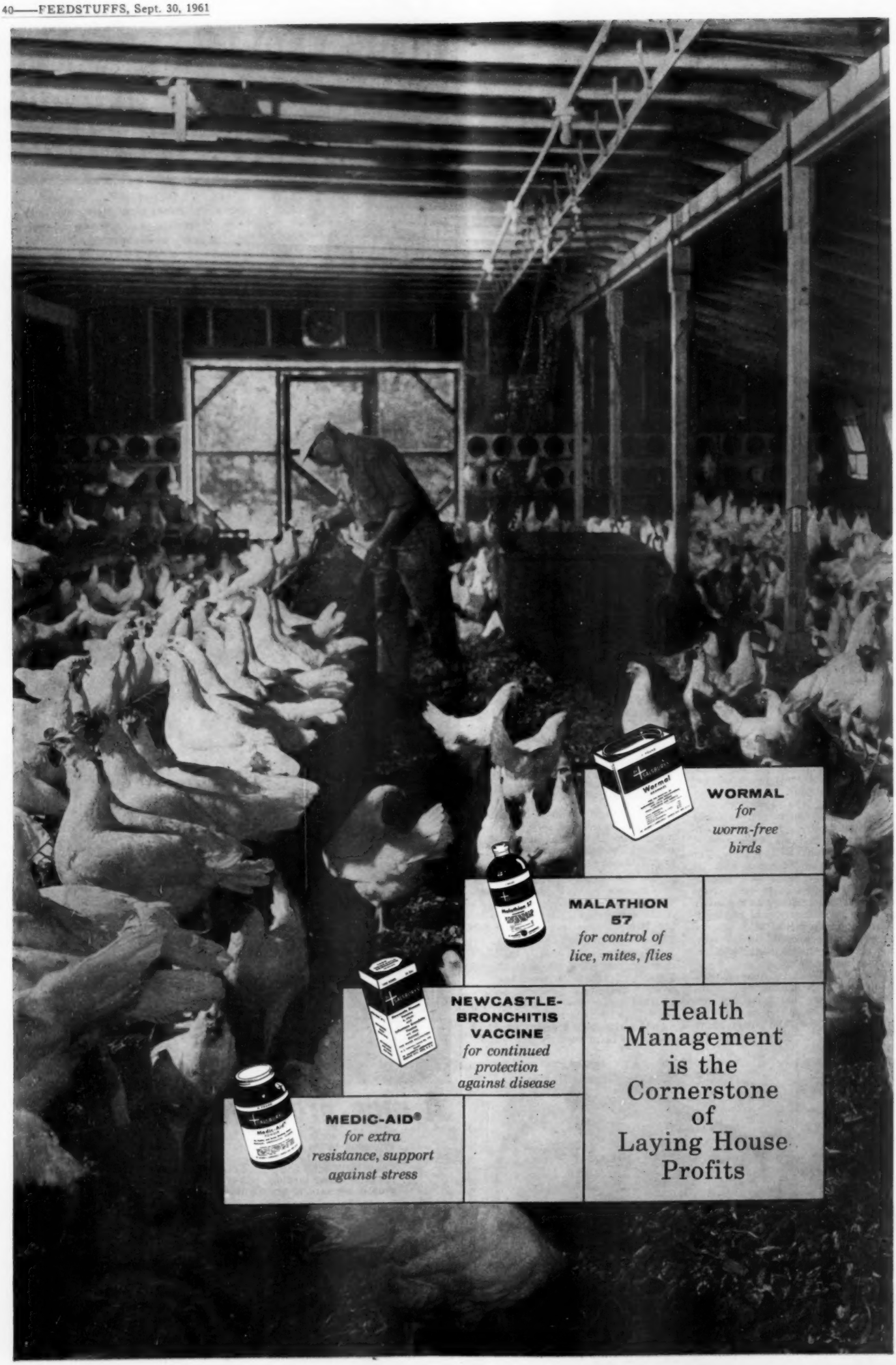
Double profit for the dealer

CALVITA VEALER is **new** business for the dealer, **but that's not all.** In addition to the CALVITA VEALER sold, each calf raised also consumes approximately 50 lbs. of calf starter. Get your dairymen started on the CALVITA VEALER feeding program and you'll have a steady, repeat business which is extra profit.

WRITE FOR FULL INFORMATION AND DISCOUNT SCHEDULE

National Vitamin Products Co.,

3401 Hiawatha Ave. • Minneapolis, Minn.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NEWCASTLE-
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protection
against disease
MEDIC-AID®
for extra
resistance, support
against stress
Health
Management
is the
Cornerstone
of
Laying House
Profits

Dr. Salsbury's

Laying House Cornerstone Plan

IT JUST MAKES GOOD ECONOMIC SENSE TO SELL YOUR CUSTOMERS ON PUTTING PULLETS INTO THE LAYING HOUSE IN GOOD HEALTH!

Here—described on these pages—is a prevention program for egg producers that can lead to higher production and profits. It consists of four Dr. Salsbury's cornerstone products—a "package" that multiplies your sales per customer. Dr. Salsbury's Laying House Cornerstone Plan makes good economic sense for you in two important ways: First, you sow the seeds of customer satisfaction by providing a health management program to help bring well-nourished pullets to their highest point of bred-in production. Second, you enjoy greater sales and a flock of profits through increased volume—not only in Dr. Salsbury's products, but in increased traffic through your place that means more total business for you. Make this health management program one of the cornerstones of your business this season. Your customers will get more eggs—and you'll get more sales.

Dr. Salsbury's 4 Cornerstone Products

. . . help your replacement-flock customers now as they prepare pullets for egg production

1. **WORMAL** Your customers know of Wormal's superior worming ability (through Dr. Salsbury's consistent advertising and by experience). It eliminates nearly 100% of tapeworms, large roundworms, cecal worms. Worm-free layers get more good out of their feed—they are helped to produce up to their bred-in capacity. Wormal Granules, in the handy 1-lb. package (enough for 250 birds), is easy to use—easy for you to inventory. Recommend Wormal before housing, at housing time, or shortly after housing.

2. **MALATHION 57** You know that Malathion is a powerful, safe insecticide—approved by the USDA for more uses than any other. It controls all important external parasites of chickens. Dr. Salsbury's Malathion 57 can be sprayed directly on the birds, or recommend it for treatment of all surfaces of the laying house. Only 2 to 4 tablespoons per gallon of water takes care of lice, mites, and flies. Available in 1-qt. size.

3. **NEWCASTLE-BRONCHITIS VACCINE** Pullets need a booster vaccination against Newcastle disease and infectious bronchitis before they start to lay. Dr. Salsbury's Wavac®, the famous drinking-water vaccine for poultry, has been a standard for years. Or, SoluVac—new, instantly soluble vaccine—may be used. Both are available for use against both Newcastle and bronchitis (combined) or in single virus form for Newcastle. 500- and 1,000-dose sizes.

4. **MEDIC-AID®** High-producing layers will need all the extra vigor and disease resistance which Medic-Aid can give them. Medic-Aid in the drinking water fights stress, aids against CRD and bluecomb. It stimulates the appetite, helps birds get more out of their feed. Medic-Aid contains 9 vitamins and the antibiotics penicillin and streptomycin. Available in "Twin Pack" (two ½-lb. jars), 2-lb. can, or carton of fifty 8-oz. pouches.

Dr. Salsbury's
Laying House
Cornerstone Plan

...multiply your profits! Look at these advantages...

More customer satisfaction because flock is better protected. Because your customers produce more eggs, they buy more. More sales volume—you sell more Dr. Salsbury products per customer. More business in other items because store traffic is increased.

Dr. SALSBURY'S LABORATORIES
Charles City Iowa, U.S.A.
MORE THAN PRODUCTS—A SYMBOL OF SERVICE

DRAGSTER—This speedy car flashes the name of Childress Elevator Co., Baring and Gorin, Mo., as it zooms along midwestern dragways. Standing beside "Bold Venture" is its driver, Jerry Childress, who was clocked at over 112 miles an hour in the recent "World Series of Drag Racing" at Cordova, Ill.

Colorado Study Shows Egg Matrix Changes During Hot Weather

FT. COLLINS, COLO. — Poultry scientists have known for some time that egg shells tend to get thinner during hot summer weather. A contributing factor may be that the egg matrix—the framework on which calcium is deposited to form the shell—undergoes important structural changes during periods of high temperature.

F. B. Mather, research assistant with the Colorado State University experiment station, bases this observation on a study in which hens were acclimated for four weeks at 70°, after which six consecutive eggs from each hen were examined. Temperature was then gradually adjusted to 90° and after an additional four weeks, eggs were collected for similar study and comparison.

Microscopic examination revealed that in eggs collected after the period of relatively low environmental temperature the matrix arranged itself in a random pattern which provided maximum surface area for calcium deposition.

Structural Changes

But in those eggs produced under the stress of 90° temperatures, structural changes in the matrix appeared to reduce surface area available for deposition of calcium, Mr. Mather said.

He emphasized that the amount of matrix available was about the same in each case. The way in which it was arranged was the determining factor, he said, since differences in arrangement and thickness of shell were significant.

Previous CSU research has indicated that adding small amounts of vitamin C to the ration has reduced numbers of thin-shelled eggs produced in hot weather, he noted. Mr. Mather said he will now expand his study to determine if adding such compounds has any effect on the way in which the matrix is arranged.

Texas Grain Sorghum Farmers Plan Cattle Feeding Operation

SEAGRAVES, TEXAS—Grain sorghum farmers in this area are making tentative plans to form a large cooperative cattle feeding project. Though no officers have been elected, three public meetings have been held and a fourth is scheduled soon, when the group will listen to a feedlot planning specialist discuss types of feedlots and costs.

One of the promoters, David Adams of the Adams Feed Store in Seagraves, says that 200 farmers and farm owners are expected to put up $500 each and pledge 50,000 lb. of milo. This $100,000 will be used to buy the land and build the feedlots, and the maize will be used to feed the cattle a full year. Once started, the group will feed out 5,200 cattle annually.

"We have contacted a large bank in Houston," Mr. Adams said, "and it has indicated it might be able to help us finance the purchase of the feeder cattle."

Many of the details have not been worked out yet. For instance, the interested farmers have not decided whether they want one large feedlot built or several smaller ones. Neither has it been decided how many cattle each man will buy, and if they will be fed on a custom basis.

"Our main purpose is to create a better and bigger market for grain sorghum," Mr. Adams pointed out. "There are very few feedlots in the area. Our chickens have dwindled, as have swine. Much of soil bank land will be put back into cultivation the next two years, which will swell the grain sorghum acreage still further."

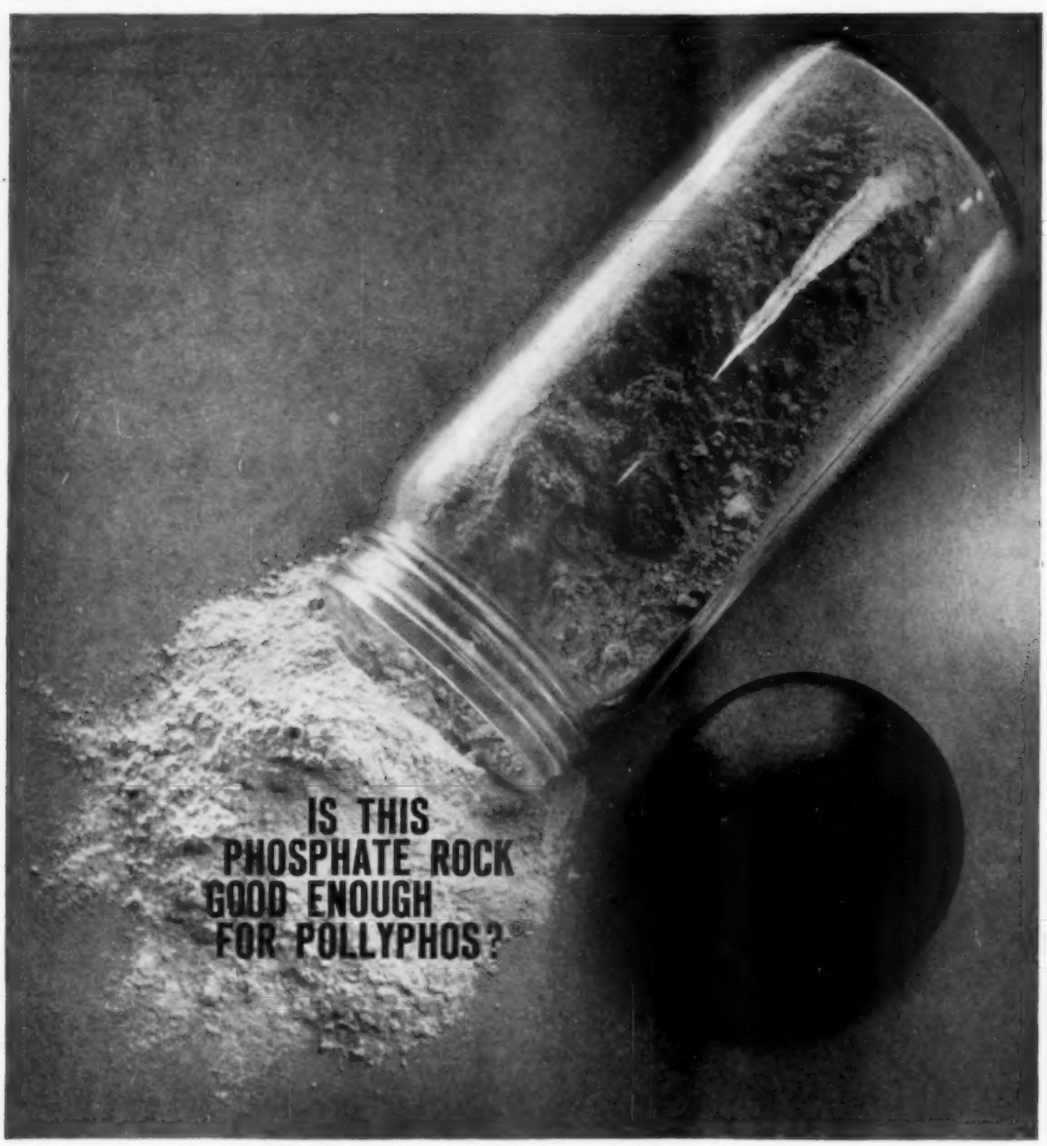
Interest in cattle feeding is higher than ever before, he pointed out, and several farmers attending the meetings have indicated that they might put in small feedlots of their own.

Cattle Feeding Advantage

Observers list several advantages for cattle feeding in this area. The climate is warm but dry, an abundance of grain sorghum and cottonseed hulls is produced locally, and the proximity to large ranches assures the feeders of a continuous supply of cattle.

One main problem is lack of experience in cattle feeding. Very few farmers have ever fed cattle and are wondering what breeds and sizes to buy and the kind of feed needed to show a profit.

Mr. Adams says that there has been much discussion on silage feeding, but that a high grain ration will likely be used, since the high energy rations are used by most of the experienced feeders in the Southwest.



Until this sample is tested, we can't be sure. But of this we are sure—every phosphate rock shipment used in POLLYPHOS must meet our rigid specifications.

We're particular about using only premium grade phosphate rock and other raw materials to make POLLYPHOS for two reasons. Both make a difference in the constitution of a formula feed.

1. Our rigid quality control procedures result in strong, uniform POLLYPHOS granules. They won't settle or cake in storage, or when mixed into your formula.
2. The rich mineral content in all POLLYPHOS is as consistent as practicality permits. *That means your feed is always the same.*

POLLYPHOS has a minimum phosphorus content of 19%, a minimum 32% and a maximum 35% calcium content. The fluorine content is 0.19% maximum.

Let us tell you more about the cost saving, quality building features of POLLYPHOS . . . in bags or in bulk, in truck or in carload lots.

Call, write, or wire us.

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PHOSPHORUS DIVISION, BOX 326, DEPT. FS-93, JEFFERSONVILLE, INDIANA

SALES OFFICES: HOUSTON 2, TEXAS • JEFFERSONVILLE, IND. • NEW YORK 19, N.Y.

HOOKER CHEMICALS PLASTICS

FEED HANDLING COSTS CUT with VIBRATORS

Feed men are finding they can materially cut operating costs by installing Cleveland Vibrators on bins, loading chutes, mixers and weighers.

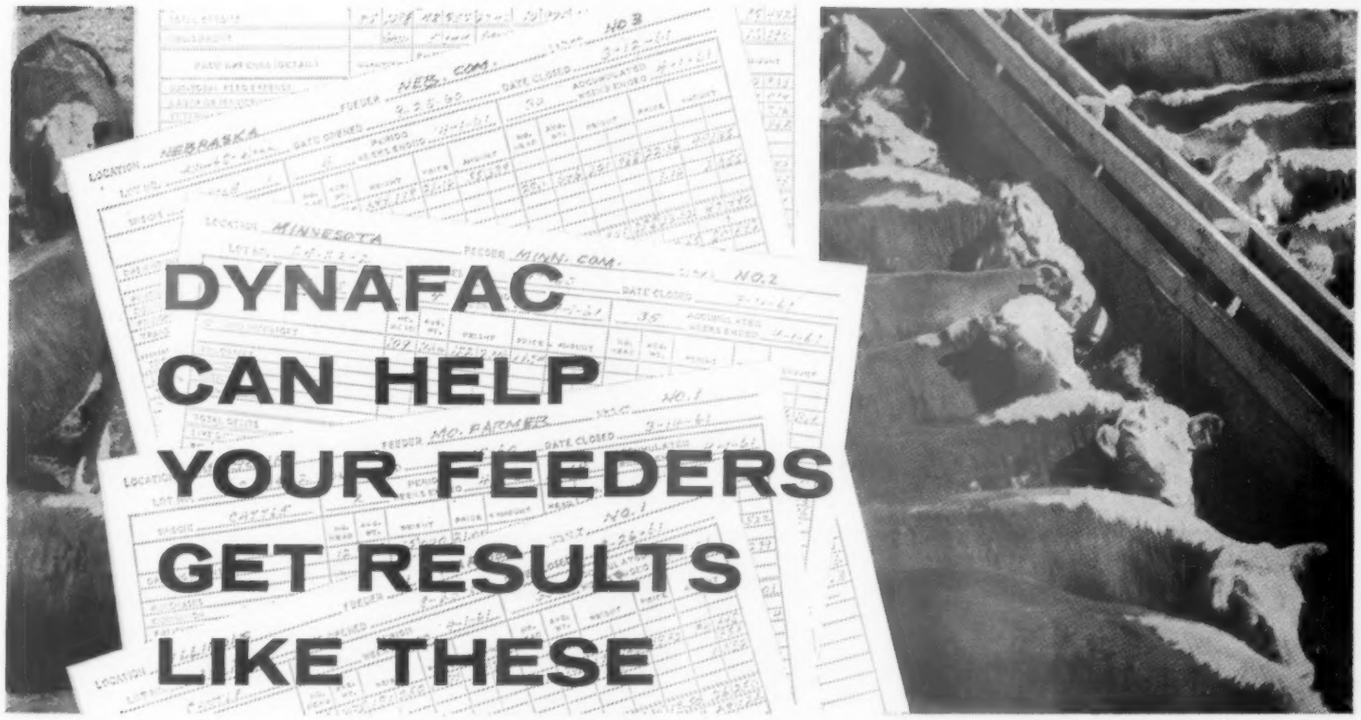
When handled in gravity flow bins, grain tends to pack and bridge, stopping the flow and causing a needless waste of time. This plugging effect is worse when liquid fortifiers such as molasses are added.

The constant jiggling supplied by a Cleveland Vibrator keeps the feed in motion. There is no opportunity for the individual grains to stick to each other. Cleveland Vibrators eliminate plugging before it gets started.

For complete details, including prices, write to

THE CLEVELAND VIBRATOR CO.

2793-9 Clinton Ave., Cleveland 13, Ohio



Dynafac-fed cattle show top feed intake and conversion ...at a feed cost of only 15.9¢ lb.

The figures below were based on the feeding of 6697 head of cattle in 24 feedlots located in widely-separated areas of the country

FEED COST (per lb. gain)		16.0¢	16.5¢	16.8¢	15.1¢	13.7¢
FEED CONVERSION (lb. feed/lb. gain)		**9.5**	**10.5**	**8.5**	**8.7**	**20.2**
DAILY GAIN (lb./head)		**2.71**	**2.83**	**3.28**	**2.96**	**1.84**
DAILY FEED INTAKE (lb./head)		**25.6**	**29.6**	**27.9**	**25.6**	**37.1**
NO. OF FEEDLOTS		**3**	**9**	**2**	**7**	**3**
NO. OF HEAD		**1,223**	**2,255**	**466**	**2,005**	**848**
TYPE OF RATION	(primary)	Corn	Corn	Corn	Corn	Corn Silage
	(secondary)	Alfalfa-Molasses	Corn Silage	Hay	Molasses	Corn

The above cattle on DYNAFAC showed:

- Excellent herd health (extremely low mortality, negligible veterinary costs)
- Consistently good appetites (above average feed consumption for type of ration day after day)
- Excellent feed conversions
- High daily gains
- Uniform results with both steers and heifers at various weights (weigh-in weights varied from 597 to 968 lb.)
- Extremely low feed costs
- High net profit
- Good results with both long- and short-term feeding

These results show the kind of performance your feed customers can get with DYNAFAC. With DYNAFAC in fattening rations to help control bloat and founder, cattle go on feed FAST and, most important of all, STAY ON FULL FEED throughout the finishing period! Offer DYNAFAC in your feeds.

MERCK CHEMICAL DIVISION
MERCK & CO., INC., RAHWAY, NEW JERSEY

MERCK

FEED CONTROL COMMENT

By BRUCE POUNDSTONE
Secretary, Association of American Feed Control Officials
Kentucky Agricultural Experiment Station, Lexington

Feed Production Handbook Is Significant Milestone

Attending the Feed Production School at Kansas City for the first time is an eye-opener. One is impressed by the large number in attendance from all sections of the continent. Predominantly from the Midwest, registrations were recorded this year from as far away as Massachusetts and Florida. Several attended from Canada.

The earnestness and attention given to all of the speakers was evidence of a keen desire to learn. Everyone, it seemed, carried a copy of the first edition of the "Feed Production Handbook" under his arm and referred to it frequently. As the name implies, this indeed is a school and feed manufacturers the pupils.

This year's school was summarized in advance in the form of a handbook, the school's textbook. This is a truly remarkable book and represents a significant milestone in the feed industry's history. It should become a best seller among feed mixers and feed people.

With 11 well-planned chapters, the information given on 288 pages is designed to help feed men at all levels of interest. It is chuck-full of the latest in production research and covers the newest concepts in the handling and distribution of feeds. The information is boiled down to only the practical aspects of each item.

As a control official, my interest centered on chapter 9, "Products Control." Occupying more space than any other chapter, this is divided into four sections, each written by a leading authority. This chapter contains more information on the subject of control than has been assembled elsewhere. Like other parts of the handbook, this chapter treats four levels of feed mixing operations. These are based upon a daily production of 30 tons, 100 tons, 200 tons and 400 tons.

The introductory section of this chapter by Warren A. Armstrong, Nutrena Mills, Minneapolis, outlines among other things the product control facilities needed for mills in each of these classifications.

Feed microscopy is explained in a three-page section by James G. Pierce, Walnut Grove Products Co., Atlantic, Iowa, giving directions enough to get a feed microscopist started.

Dr. H. S. Wilgus, The Ray Ewing Co., Pasadena, Cal., is the editor of an equally excellent section on "Federal Food and Drug Administration Regulations and the Feed Industry." He not only gives the latest interpretations but offers suggestions, illustrated with pictures, as to how mills should be equipped to comply with FDA requirements.

The last section of this chapter is entitled "Feed Ingredients Guide," by Maxwell L. Cooley of Hoffman-Taff, Inc., Springfield, Mo. This brings together in one place terms, definitions, chemical composition (average and range), methods of sampling, items to watch for in various products and other helpful pointers such as the number of analyses required for mills in each of the four categories to give adequate quality control.

Other Headings

Other chapter headings suggest the broad scope of this volume as including "Terminology," "Basic Processing Operations," "Flow Design," "Plant Layout," "Equipment" and "Operating" Standards, "Record Systems" and "Materials Handling and Storage." Included also is an introductory chapter tracing the history of the feed industry with an analysis of "The Present."

An examination of this book will quickly convince the reader of its significance. Copies are $25 each and may be ordered from:

Feed Production School, Inc.,
20 West Ninth St. Bldg.,
Kansas City 5, Mo.

One idea from this book will more than repay the purchase price. It is my guess a purchaser will be repaid many times over with ideas gained.

Proceedings of the Feed Production Schools for 1958, 1959 and 1960 are still available. These are entitled "Bulk Handling," "Pelleting and Related Subjects" and "Particle Reduction, Proportioning, Premixing, Contamination Control." Transcripts of the Small Mill Workshops held in 1958 and 1959 are also available.

The entire feed industry owes those responsible for the Feed Production School a debt of gratitude for this undertaking. Few realize the tremendous amount of work required to carry on a program of this kind. This year's school involved over 50 persons from all parts of the U.S. and segments of the industry who participated in the preparation of the program and in the writing of the handbook.

$2 MILLION AG STRUCTURE

COLLEGE PARK, N.M.—Groundbreaking ceremonies for a $2 million agricultural building were held Aug. 31 on the New Mexico State University campus. The new building, to be completed next year, will house all agricultural divisions of the university now scattered in 17 buildings.

These birds are telling something about minerals

YOU SHOULD KNOW

No on-farm chickens will ever enjoy their diets! The feed for most of these birds contains abnormal amounts of one of the trace elements. In this and other similar experiments the effects of several different levels of an element are compared. In one test we subjected a group of young birds to a feed containing 1,125 times as much iron as is normally added to a feed! These trials at the Lime Crest Research Laboratory tell us about the tolerance of chickens for the trace elements in Lime Crest Trace Mineral Pre-Mixes. They also tell us about their tolerance for the various compounds of these elements. Our iron experiment, for example, demonstrated conclusively that in a formula feed ferrous carbonate is preferable to either ferrous gluconate or ferrous sulphate. Careful research like this assures you that the compounds in Lime Crest Trace Mineral Pre-Mixes are not only effective sources of the mineral elements but completely safe at levels 100 times as great as the levels recommended for your finished feeds. You can also be sure of Lime Crest performance in your mill . . . because of a special process, exclusive with Lime Crest, our Trace Mineral Pre-Mixes are guaranteed to flow freely and never cake. It costs so little per ton to add the advantages of Lime Crest Pre-Mixes to your feeds, why not look into it today. Write for our new illustrated folder and price list.

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Board of Trade Victor 2-4671
KANSAS CITY, MO.

Get Famous WAVAC® in

NEW VAC-PAK CARTON

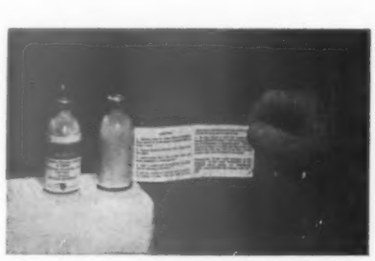
from Dr. Salsbury's exclusively

Dr. Salsbury's famous Wavac (drinking-water vaccine) is now packaged in a new ten-pack container that makes it easier to stock, handle, and sell. Note the new look . . . neat, compact appearance . . . ten bottles of Wavac nested in a glistening, frosty white carton made of expandable polystyrene.

Two kinds of Wavac to meet every flock need: Wavac in combined form to protect against Newcastle disease and infectious bronchitis; and Newcastle Wavac in single form. Wavac in the new Vac-Pak is being advertised to your customers. They're looking for the "new look" in vaccine packaging — Vac-Pak. So stock and sell Wavac in the new Vac-Pak carton.

Contact your Dr. Salsbury's representative or write direct.

- Convenient, easy to handle and store, highly resistant to impact damage.
- Vac-Pak is color-coded. Sealing tape identifies the contents, serial number, expiration date.
- Same high-quality Wavac so well known to poultrymen everywhere.
- Each bottle completely labeled—all directions on or inside fold-out label (see at right)



Dr. SALSBURY'S LABORATORIES

Charles City Iowa, U.S.A.

MORE THAN PRODUCTS — A SYMBOL OF SERVICE

Convention Calendar

Oct. 2-3—Washington Poultrymen's Institute; Centralia Junior College; Dr. Leo Jensen, Poultry Science Dept., Washington State University, Pullman.

Oct. 3-5 — Northeastern Poultry Producers Council Exposition and Convention; Farm Show Bldg., Harrisburg, Pa.; sec., Richard I. Ammon, 10 Rutgers Place, Trenton 8, N.J.

Oct. 4-6—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Poultry Science Dept.

Oct. 8-10 — Poultry Industries of Louisiana; Bellemont Motor Hotel, Baton Rouge, La.; sec., Stella Jones, Poultry Industry Dept., Louisiana State University, Baton Rouge.

Oct. 10-11—Iowa Poultry Convention; Veteran Memorial Auditorium, Des Moines; sec., Iowa Poultry Assn., LeRoy Kruskop, 535 E. Lincoln Way, Ames, Iowa.

Oct. 11-12—Missouri Turkey Short Course and Show; University of Missouri, Columbia; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia.

Oct. 12-13 — West Virginia Feed Dealers Assn.; Blackwater Falls Lodge, Davis, W.Va.; sec., J. Z. Ellison, 801 Willowdale Road, Morgantown, W.Va.

Oct. 15-17—Kentucky Poultry Federation and Kentucky Poultry Improvement Assn.; Kenlake Hotel, Hardin, Ky.; field mgr., Kentucky Poultry Improvement Assn., John W. Tuttle, 730 Rose St., Lexington, Ky.

Oct. 15-20—School of Executive Development in Business Management, Unit III; Continuing Education Center, University of Georgia, Athens; sec., Southeastern Poultry & Egg Assn., Harold E. Ford, 235 Ponce de Leon Ave., Decatur, Ga.

Oct. 16-17 — California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; co-sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; sec., California Hay, Grain & Feed Dealers Assn., Leo L. Johnson, Blue Anchor Bldg., 1400 10th St., Sacramento, Cal.

Oct. 18-19—National Broiler Council; King Edward Hotel, Jackson, Miss.; exec. v.p., Frank Frazier, Byrd Building, Richmond 26, Va.

Oct. 23-25 — Centennial Nutrition Conference; Hotel Muehlebach, Kansas City 5, Mo.; sponsored by Midwest Feed Manufacturers Assn. and Land-Grant Colleges in Midwest's area; executive vice president, Lloyd S. Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Oct. 24-25—Virginia State Poultry Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19.

Oct. 24-25—Indiana State Poultry Assn.; Hotel Severin, Indianapolis; sec., Robert L. Hogue, Poultry Science Bldg., Purdue University, Lafayette.

Oct. 26-28—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Head, Feed and Fertilizer Control Dept., University of Kentucky, Lexington.

Nov. 1 — Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Dr. Philip Derse, Wisconsin Alumni Research Foundation, 506 Walnut St., Madison 5, Wis.

Nov. 1-2 — Kansas Poultry Assn.; Broadview Hotel, Wichita; sec., Harry J. Reed, Box 663, Manhattan.

Nov. 1-3 — Cornell Nutrition Conference; Statler Hilton Hotel, Buffalo, N.Y.; chm., Prof. Douglas E. Hogue, Animal Husbandry Dept., Wing Hall, Cornell University, Ithaca, N.Y.

Nov. 5-8 — National Renderers Assn., Inc.; Waldorf-Astoria Hotel, New York, N.Y.; asst. sec., Rose Alpert, 30 North La Salle St., Chicago 2, Ill.

Nov. 7-8 — Nebraska Poultry Improvement Assn.; National Guard Armory, 176 No. 10th St., Lincoln; sec., Doyle H. Free, Poultry Husbandry Bldg., University of Nebraska, Lincoln.

Nov. 8-9 — Illinois Feed Assn.-Illinois Poultry & Hatchery Federation joint convention; Springfield Armory, Springfield; sec., I.F.A. Dean M. Clark, 141 W. Jackson Blvd., Chicago 4; sec., I.P.H.F., Aubrey Harless, Shelbyville, Ill.

Nov. 9-10—National Swine Industry Conference; Statler-Hilton Hotel, St. Louis, Mo.; chm., Keith Myers, Grundy Center, Iowa.

Nov. 13-14 — Washington Animal Industry Conference; Skagit Valley College, Mount Vernon, Wash.; John G. Wilson, mgr., Washington State Feed Assn., Inc., 814 Second Ave. Bldg., Seattle 4.

Nov. 16-19—Florida Nutrition Con-

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

Dec. 13—American Society of Agricultural Engineers; Palmer House, Chicago; grain storage and feed processing session, cooperative program sponsored by ASAE and Grain Processing Machinery Manufacturers Assn.; sec., GPMMA, John Wessman, 400 W. Dartmouth Rd., Kansas City 13, Mo.

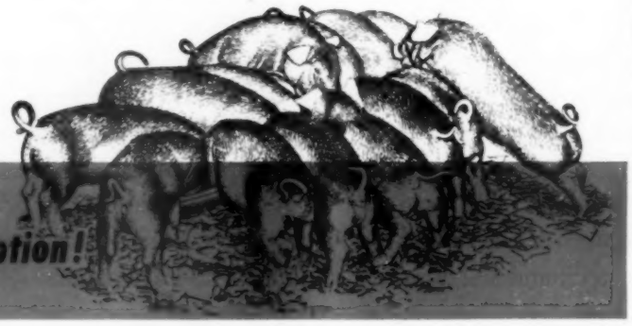
1962

Jan. 31-Feb. 1 — Illinois Nutrition Conference; University of Illinois, Urbana; chm., Dr. Carl L. Davis, Dairy Science Dept.

NEW FROM THOMPSON-HAYWARD

"Pig Caller"®

Aroma Additive for Pig Starters



that definitely increases feed consumption!

Now available to feed manufacturers is a new non-nutritive additive for pig starter feeds that gets pigs on dry feed early, makes them eat more during the critical early growth stages!

New PIG CALLER is a powder that can be easily and economically added to any pig starter formula. As a replacement for sugar and flavor products it reduces considerably the per ton ingredient cost of pig starter and makes it easier to pellet. Used along with sugar in the formula PIG CALLER serves as a further feed consumption stimulant. Tests have shown that PIG CALLER is a more effective consumption stimulant than flavor additives.

RATION PREFERENCE TEST RESULTS

Suckling Pigs:	Lbs. Feed consumed
Lot #1 (Four sows, 26 pigs)	
Choice of two rations:	
(1) 5% sugar added	95
(2) 5% sugar plus 2 lbs. PIG CALLER added	831
Lot #2 (Five sows, 45 pigs)	
Choice of two rations:	
(1) 5% sugar added	267
(2) 5% sugar plus 2 lbs. flavor added	683
Lot #3 (Five sows, 41 pigs)	
(1) 5% sugar plus 2 lbs. flavor added	320
(2) 5% sugar plus 2 lbs. PIG CALLER added	413
Weaned Pigs:	
(Test lot of 39 pigs from 5 sows)	
Choice of three rations:	
(1) Basic (no sugar, flavor or PIG CALLER)	113
(2) Basic plus 5% sugar added	306
(3) Basic plus 2 lbs. PIG CALLER added	408

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P. O. Box 768
Kansas City 41, Missouri

Please send sample and descriptive folder on new PIG CALLER.

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COMPANY

ADDRESS

CITY STATE

T-H

THOMPSON-HAYWARD
Chemical Company

affiliate Philips Roxane
Kansas City, Missouri

Japanese Visitors Tour Nutrena Farm

MINNEAPOLIS — Production systems for livestock and poultry were the center of keen interest for a six-man Japanese feed grain mission which toured the Cargill-Nutrena Research Farm at Elk River, Minn.

The group, on a month-long swing through the U.S., spent an afternoon looking over the experimental facilities at the farm and getting answers to questions from Dr. Cloy Knodt, research farm director.

Dr. Knodt explained to the group that research at the farm not only includes feeds and feeding programs but also buildings and equipment, management methods and marketing of end products. Farmers, he said, need help in such things as choosing strains of poultry, vaccination and other health measures. Thus, a "systems research" concept governs experimental activities at the farm.

Controlled Lighting

The visitors were shown flocks of layers on controlled lighting tests ("stimulighting"), which Dr. Knodt said have shown increased profits of 30¢ per bird annually. They also were told of outstanding results obtained by the Coccivac vaccination method of combatting coccidiosis. Some 41,000 birds have been vaccinated at the farm, and none have shown coccidiosis symptoms in up to 24 months time, Dr. Knodt said. Before the vaccination program was started, extensive losses from the disease had occurred at the farm.

The visitors showed considerable interest in this information as coccidiosis also is a problem in Japan.

The tour also included inspection of the Pigloo system for swine in which sows are placed in isolation in individual huts before farrowing. Comparisons with central farrowing systems, also at the farm, show that the Pigloo method reduces diseases, losses and labor costs, Dr. Knodt said.

Sponsored by the U.S. Feed Grains Council, the U.S. tour helped acquaint the Japanese agricultural leaders with grain production and marketing, feed manufacturing, nutrition and disease research and feeding in several stops across the country.

They also were told of outstanding results obtained by the Coccivac vaccination method of combatting coccidiosis. Some 41,000 birds have been vaccinated at the farm, and none have shown coccidiosis symptoms in up to 24 months time, Dr. Knodt said. Before the vaccination program was started, extensive losses from the disease had occurred at the farm.

(THIS ARTICLE APPEARED IN FEEDSTUFFS, OCT. 29, 1960)

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It can work for you

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NEW!

Single drop applicator for oral vaccination with COCCIVAC provides easy method for safe, sure, lasting protection from coxy. Free sample applicator on request.

CocciVac Type 4 is available for broilers. Types A and B for layers and roasters—and for broilers in heavy exposure areas.

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SUBSIDIARY OF STERLING DRUG INC
Opelika, Alabama

COCCIVAC IS ALSO SOLD BY

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Animal Health Division
1450 Broadway, New York 18, N. Y.

CALENDAR FOR 1961-62

SEPTEMBER

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ference; Grand Bahama Hotel, West End, Grand Bahama Island; chm., Dr. J. P. Feaster, Animal Husbandry and Nutrition Dept., University of Florida, Gainesville.

Nov. 17—Nebraska Feed and Nutrition Conference; University of Nebraska, Lincoln; Dr. P. L. Kelly, chm., Dairy Husbandry Dept.

Nov. 17-18—Tennessee Feed Manufacturers Assn.; Chisca Downtown Motel, Memphis, Tenn.; sec., C. H. Warfield, 200 American Trust Bldg., Nashville, Tenn.

Nov. 19-21—Western Grain & Feed Assn. of Iowa; Fort Des Moines Hotel, Des Moines, Iowa; sec., Bob Skinner, 401 Shops Bldg., Des Moines 9.

Nov. 30-Dec. 1—Dealers Nutrition Conference; University of Nebraska, Lincoln; Dr. P. L. Kelly, chm., Dairy Husbandry Dept.

Dec. 5-6—North Dakota Turkey Convention; Civic Center Auditorium, Fargo; sec., North Dakota Turkey Federation, Irving J. Mork, Box 2408, State University Station, Fargo.

Dec. 6-7—Missouri Poultry and American Poultry & Hatchery Federation Midwest Quickie Convention; Hotel Continental, Kansas City, Mo.; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia, Mo.

Dec. 7-8—Michigan Feed & Grain Dealers Assn.; Pantlind Hotel, Grand Rapids, Mich.; sec., Nevels Pearson, Box 472, East Lansing.

Dec. 7-8—North Carolina Animal Nutrition Conference; North Carolina State College, Raleigh; chm., Dr. G. H. Wise, Animal Nutrition Section, Animal Industry Dept.

1962

Jan. 8-9—Kansas Formula Feed Conference; Kansas State University, Manhattan; chm., Prof. T. B. Avery, Poultry Science Dept., West Waters Hall.

Jan. 9-11—National Turkey Federation; Memorial Auditorium, Dallas, Texas; co-headquarters hotels, Baker and Adolphus; sec., M. C. Small, Box 69, Mount Morris, Ill.

Jan. 21-23—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis 4.

Jan. 21-24—Farmers Grain Dealers Association of North Dakota; Civic Memorial Auditorium, Fargo; sec., Lloyd C. Hanson, 513 Black Bldg., Fargo.

Jan. 28-30—Midwest Feed Manufacturers Assn.; Shamrock-Hilton Hotel, Houston, Texas; exec. vice pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City, Mo.

Jan. 29-31—Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Jan. 31-Feb. 1—New Hampshire Poultry Health Conference; University of New Hampshire, Durham; Richard Warren, Poultry Science Dept.

Feb. 1—Missouri Turkey Day; University of Missouri, Columbia; sec., Missouri Poultry Improvement Assn., E. M. Funk, Box 568, Columbia.

Feb. 1-2—Oregon Animal Industry Conference; Oregon State University, Corvallis, Ore.; co-sponsored by the Oregon Feed & Seed Dealers Assn. and Oregon State University; chm., Bill Eggimann, Dairy Cooperative Assn., 2613 S.E. 8th Ave., Portland.

Feb. 4-6—Wyoming Grain, Feed & Seed Dealers Assn.; Townsend Hotel, Casper, Wyo.; sec., Everett L. Berry, Box 118, Sheridan, Wyo.

Feb. 5-7—Association of Southern Agricultural Workers; Jacksonville, Fla.

Feb. 7-9—American Dehydrators Assn.; Stardust Hotel, Las Vegas, Nev.; Joseph Chrisman, 430 Board of Trade Bldg., Kansas City 5, Mo.

Feb. 9-11—Poultry Fact Finding Conference; sponsored by Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 67 E. Madison, Chicago 2, Ill.

Feb. 12-13—Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry and Range Management Dept.

Feb. 14-15—Pacific Northwest Feed Mill Production School; Benjamin Franklin Hotel, Seattle; sponsored by Washington State Feed Assn.; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 15-16—Utah Feed Manufacturers & Dealers Assn. Annual Nutrition Conference and Meeting; The Newhouse Hotel, Salt Lake City; sec., Dr. Lawrence Morris, Brigham Young University, Provo.

Feb. 16—Washington State Feed Assn. annual convention; Benjamin Franklin Hotel, Seattle; mgr., John G. Wilson, 814 Second Ave. Bldg., Seattle 4.

Feb. 20-21—Virginia State Feed Convention and Nutrition Confer-

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ence; Hotel Roanoke, Roanoke, Va.; sec., Virginia State Feed Assn., J. Paul Williams, 615 E. Franklin St., Richmond 19, or Prof. Paul M. Reaves, Dairy Science Dept., Virginia Polytechnic Institute, Blacksburg.

Feb. 26 - March 1 — Colorado Livestock Days; Colorado State University, Fort Collins; chm., Dr. C. D. Story, head, Animal Science Dept.

March 2-3—Oklahoma Feed Industry Conference and Work Shop; Oklahoma State University, Stillwater; Dr. Rollin H. Thayer, chm., Poultry Science Dept.

March 8 - 9 — Maryland Nutrition Conference; Shoreham Hotel, Washington, D.C.; chm., Dr. R. D. Creek, Poultry Dept., University of Maryland, College Park.

March 15-16—Oregon Feed & Seed Dealers Assn.; Sheraton Hotel, Portland; sec., Russ Hays, Lewis Bldg., Portland 4.

March 15-17 — Pacific Dairy and Poultry Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Lloyd J. Powers, 1304 E. 7th St., Los Angeles 21.

March 19-21—Poultry and Egg National Board; Palmer House, Chicago, Ill.; mgr., Lloyd H. Geil, 8 S. Michigan Ave., Chicago 3.

March 21-23—Grain & Feed Dealers National Assn.; Denver - Hilton Hotel, Denver, Colo.; Secretaries Circle meetings March 19-20; sec., Herbert L. Sharp, 401 Folger Bldg., 725 15th St. N.W., Washington, D.C.

March 25 - 30 — Grain Elevator & Processing Superintendents; Town House Motel, Omaha, Neb.; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

March 28—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati, Ohio; Dr. Lawrence E. Carpenter, Executive Director, Distillers Feed Research Council, 1232 Enquirer Bldg., Cincinnati 2.

March 28—Commercial Egg Clinic; Texas A&M College, College Station; B. C. Wormeli, Extension Poultry Husbandman.

April 9-10 — National Institute of Animal Agriculture; Purdue University, Lafayette, Ind.; sec., Karl D. Butler, P.O. Box 521, First National Bank Bldg., Ithaca, N.Y.

April 10-12—Animal Health Institute; Statler-Hilton Hotel, Washington, D.C.; sec., D. L. Bruner, 512 Shops Bldg., Des Moines 9, Iowa.

April 13 — Illinois Cattle Feeders Day; University of Illinois, Urbana.

April 18—Nebraska Feeders Day; University of Nebraska, Lincoln; chm., Dr. Robert M. Koch, Animal Husbandry Dept.

April 26-28 — Texas Grain & Feed Assn.; Hotel Texas, Ft. Worth; sec., R. B. Bowden, 504 Ft. Worth Club Bldg., Ft. Worth 2.

April 26-28—California Hay, Grain & Feed Dealers Assn.; Biltmore Hotel, Los Angeles, Cal.; sec., Leo L. Johnson, 1400 10th St., Sacramento 14, Cal.

April 26-28—Kansas Grain & Feed Dealers Assn.; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

May 4 - 5 — Illinois Grain Dealers Assn.; St. Nicholas Hotel, Springfield, Ill.; exec. sec., Donald E. Palmer, 910 Lehmann Bldg., Peoria, Ill.

May 10-11 — Alabama Poultry Industry Assn. Convention and Poultry Jubilee; Dinkler - Tutwiler Hotel, Birmingham, Ala.; sec., W. L. Walsh, Box 567, Montgomery.

May 10-12—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago, Ill.; sec., W. T. Diamond, 53 W. Jackson Blvd., Chicago 54.

May 27-28—Missouri Grain & Feed Assn.; Hotel Governor, Jefferson City, Mo.; sec., D. A. Meinershagen, Higginsville, Mo.

June 28-30—Canadian Feed Manufacturers National Assn.; Sheraton Brock Hotel, Niagara Falls, Ontario, Canada; sec., Ontario Division, H. J. Willcock, 356 Eastern Ave., Toronto 8, Ontario.

July 17-19—American Poultry Congress & Exposition; St. Louis, Mo.; sec., American Poultry & Hatchery Federation, Don M. Turnbull, 521 E. 63rd St., Kansas City 10, Mo.

Aug. 13-18 — 12th World's Poultry Congress; Show Grounds of the New South Wales Royal Agricultural Socity, Sydney, Australia; Dr. Cliff D. Carpenter, chairman, U.S. Participation Committee, 1207 Emerald Bay, Laguna Beach, Cal.; Dr. A. William Jasper, secretary, c/o AFBF, 2300 Merchandise Mart, Chicago 54, Ill.

1963

March 24-29 — Grain Elevator & Processing Superintendents; Commodore Perry Hotel, Toledo, Ohio; sec., Dean M. Clark, 1115 Board of Trade Bldg., Chicago 4, Ill.

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Clip this as a reminder to call Smokey for ■ soybean meal, ■ all grains, ■ rolled oats, ■ oat mill feed, ■ packers products, and other feed ingredients.

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UP OR DOWN

By Dr. Leonard W. Schruben, Agricultural Economist, Kansas State College

Plenty of Soybean Meal in Sight

The supply of high protein feeds per animal unit has more than doubled the past 20 years. Last year's supply was a record and it looks as though the season coming up will see still another record. There ought to be enough high protein feed to go around without a big price squeeze. You can see how the supply picture has changed by looking at Exhibit 1. But, to look at only the supply side would be misleading.

An animal unit is about the equivalent of one dairy cow so far as feed use is concerned. When we compare supplies on this basis we are taking into account demand factors also.

Use of protein supplement has increased rapidly. More and more manufactured feed is being used and many kinds have a protein base as well as supply a variety of other essential nutrients.

"Wonder Crop"

Over the past quarter century the increase in the production of soybeans has provided increased protein supplies. From a crop of 30 million bushels in 1936 to an expected crop of about 720 million bushels in 1961 is why the soybean has been called America's wonder crop. New records of production have been set almost every season in recent years. The 1961 crop promises to be one fourth larger than the previous record set in 1958.

Prices of protein supplement, particularly soybean meal, are expected to decline into the winter months. The cotton crop is forecast at about equal to that of a year ago. This means that as much cottonseed cake and meal should be available as last year. Even if flax production is one third less than last year, there should be no shortage of supplements.

Meal Price Patterns

Soybean meal price patterns during 1960 and so far in 1961 are shown in Exhibit 2. After a slow start they "took off" early this year from the low levels reached last November. After reaching a high point in April, prices have stabilized in the $70-75 range.

Soybeans yield both oil and meal. At given prices for soybeans, the higher the price of oil the less crushers need to charge for meal. When oil and meal are both high, crushers bid for beans. Remember last spring when beans were over $3 bu.? Meal was going up, too.

It is difficult to predict protein supplement prices. Present indications are that you need not be in a hurry to contract your protein requirements for the season. Prices reached $81.30 ton (44% Kansas City) in April. Some declines since the peak was reached indicate the possibility of weaker prices later on. Of course, you must remember that the picture can change very rapidly —so keep your eye on the market.

EXHIBIT 1. High Protein Feed Supply Per Animal Unit (Soybean Meal Equivalent)

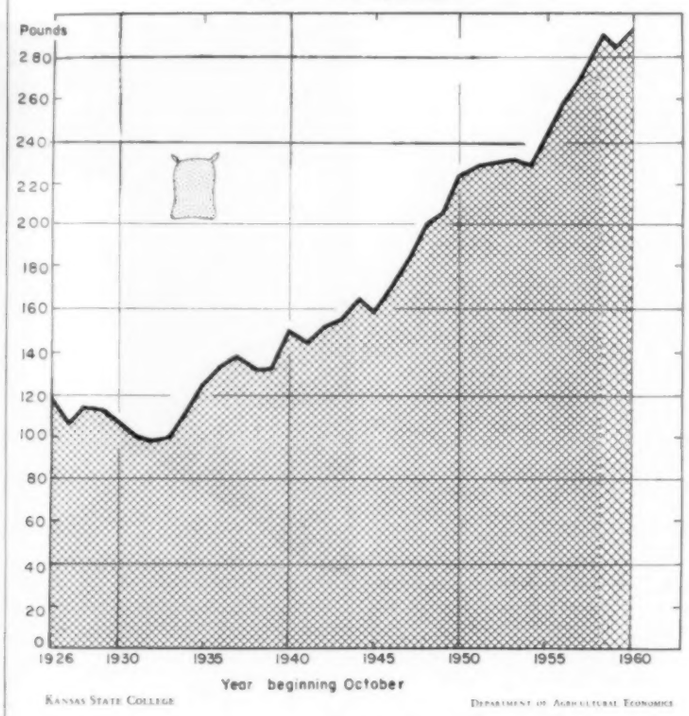
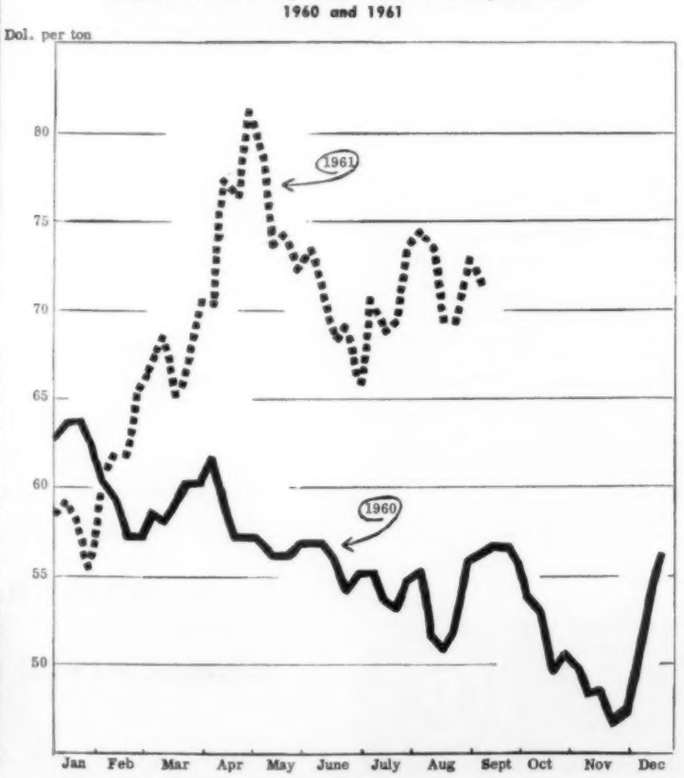


EXHIBIT 2. Kansas City Price of Bulk 44% Soybean Meal 1960 and 1961



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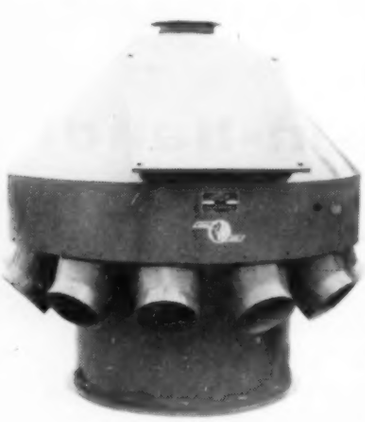
you need only one finger with H & S PUSH BUTTON CONTROL

Extra monitor panels are available to allow for check on settings from anywhere in your plant.



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Can be fitted with 5 to 20 openings with diameter specifications in 6", 7", 10" and 12" sizes.

Adaptable to mounting on elevator legs, collectors, sifters, mixers, screw-conveyors and belt conveyors.

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FREE KISS KITS

Here's a proven promotion plan to help you sell bag after bag of Scotch O Lass or Omalass-dried molasses products . . . over 5,000 kits were on display last spring . . . and now we make the offer to YOU.

The KISS KIT is FREE with a ton order of either Omalass or Scotch O Lass. Kit includes: product samples, literature, compact counter display, and FOUR POUNDS of DELICIOUS CANDY KISSES made from molasses. (What else?)

There are handy re-order forms for extra kits and more candy at a price so low your customers will want to order some. (JUST $1.50 for 4 pounds.)

Have a prospective customer take the sample home—try it on his livestock. They'll go for Omalass and Scotch O Lass like he'll go for the candy. The literature helps you sell, too! Shows how easily he can mix, top-dress, and feed Omalass or Scotch O Lass in any feeding program.

See your Scotch O Lass and Omalass Distributor or write . . .

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BLATCHFORD'S WAUKEGAN, ILLINOIS

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Reaffirms 'Supply Control' Proposals

CHICAGO—This has been said before in Feedstuffs, but it was said again this week in Chicago, and by a top government spokesman: The present administration in Washington is determined to impose mandatory controls on agriculture that will be "more effective in curtailing surplus output."

Dr. Willard Cochrane, chief economic advisor to the Secretary of Agriculture, told the Chicago Agricultural Club that the administration wants "supply control," with controls over production and marketing, along with higher price supports and subsidies.

Dr. Cochrane, speaking at a luncheon meeting of the group, indicated that he believes that strict production controls should be applied to some animal products—including dairy products, poultry and eggs—as well as the major field crops.

Dr. Cochrane said that, while the original omnibus farm bill did not pass this year, "I still think—and in this I don't waiver in any way—that we've got to find a way to make supply control work. I don't see any other way, regardless of the mechanics.

"This administration has got to sit down with one commodity group after another and simply explain the facts of life to them, namely that there is only one door out of this (surplus) room and that is by supply control."

He said that Plains States wheat growers have been convinced that compulsory government controls are necessary but that "Corn Belt farmers are still looking for miracles."

Dr. Cochrane noted that the broiler industry traditionally had opposed government controls. Now, he said, the industry is "banging on every door in Washington" asking for help from USDA in solving the surplus and low price problem.

Questions I'm asked about

vitamin **D** *fortification*

Dr. G. C. Wallis, recognized authority in the field of Vitamin D₃ nutrition for livestock

Q: Will two to five pounds of good sun-cured hay provide enough vitamin D for my dairy cows?

A: No. Sun-cured hay varies widely and unpredictably in vitamin D content—80 units to 1,250 units per pound have been reported for sun-cured alfalfa hay. Two to five pounds of lower potency hay would provide about 200 to 500 units per cow per day which is insignificant. Even though the hay happened to be high in vitamin D, there would be only a modest contribution made toward the suggested optimum intake of 6,000 to 8,000 units per pound of dairy ration.

Q: How can I check to make sure my dairy cows are receiving enough vitamin D?

A: Good safeguards can be taken but an absolute check is probably not possible. Optimum vitamin D levels for top performance and longevity have not been clearly established but work is in progress. Mild deficiencies are often difficult or impossible to detect but they can be costly. Available information suggests the use of 6,000 to 8,000 units of vitamin D per pound of complete grain ration. Confidence in your feed manufacturer and the good performance of his well-formulated rations would be important for users of commercial feeds.

Q: Is there any danger of my feeds having too much vitamin D?

A: Our recommendations for the vitamin D fortification of feeds are well within the generally recognized safe limits of vitamin D intake for the different species of animals. With careful methods and efficient modern mixing equipment feed manufacturers are able to achieve good distribution of micro-ingredients. The chance of overdosage is remote.

Q: How much vitamin D do baby pigs and growing-finishing pigs need?

A: Early weaning, fast growth, confinement raising, multiple farrowing and other changes have greatly increased nutritional stress factors since the vitamin D requirements of pigs have been carefully studied. Based largely on amounts that have given good results in experimental and practical swine raising programs, a number of Experiment Stations are suggesting about 500 units of vitamin D per pound of milk replacer and starter with somewhat smaller amounts as pigs approach market weight.

Q: Do sheep get enough vitamin D from natural sources?

A: Not always. For instance, in recent English studies lambs from ewes given supplemental vitamin D averaged 6 pounds heavier at weaning in one flock and 9 pounds heavier in another than lambs from ewes given no vitamin D. Fleeces from experimental animals were more than ½ pound heavier, graded higher, and brought a premium price.

D. C. Wallis

For more complete answers to any of these questions write to Dr. G. C. Wallis, Director of Nutrition, Agricultural Department, Standard Brands Incorporated, 625 Madison Avenue, New York 22, N. Y.

Fleischmann's Fidy Irradiated Dry Yeast
rich in vitamin D for four-footed animals

another fine product of
Standard Brands Incorporated

These educational advertisements tell farmers about

THE IMPORTANCE OF VITAMIN D FORTIFICATION

Sunshine and sun-cured roughages are undependable sources of essential Vitamin D. Farmers and feeders have many questions about Vitamin D fortification. The advertisement illustrated here (one of a series) shows how Dr. G. C. Wallis, recognized authority on Vitamin D nutrition, answers such questions through FIDY advertising in leading magazines.

It's all part of the educational FIDY program to emphasize that today's added stress factors have changed livestock nutrition requirements. More than ever, farmers must be sure that lack of a dependable Vitamin D source is not a limiting factor in their feed.

Be sure to fortify your feeds with FIDY—Fleischmann's Irradiated Dry Yeast. Here is a rich source of Vitamin D₃ that is dependable—and is economical, easy to use, and truly outstanding in dispersion qualities.

And, if your feeders have questions about Vitamin D nutrition, just have them address—

Dr. G. C. Wallis
Director of Nutrition,
Agricultural Department
Standard Brands Incorporated
625 Madison Avenue
New York 22, N. Y.

Free technical data, educational and sales aids are also available from the Agricultural Dept. upon request. Write for request form, showing available materials.

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D FOR FOUR FOOTED ANIMALS

North Dakota Feed Tonnage Drops

BISMARCK, N. D. — Commercial feed sales reported in North Dakota for 1960 decreased about 5% from the all-time high reached in 1959, reports C. P. Dahl, director of the State Laboratories Department at Bismarck.

The 1960 sales totaled 100,133 tons, compared with the record 105,415 tons in 1959. The 1960 sales figure is also compared with the 1958 record high of 80,395 tons.

Pacing 1960 sales were 24,536 tons of complete swine feeds; 11,315 tons of beef cattle feed supplements; 10,800 tons of complete beef cattle feeds, and 10,274 tons of complete turkey feeds. Other poultry feed sales during 1960 included 9,470 tons of complete chicken feeds; 4,381 tons of chicken feed supplements, and 4,480 tons of turkey feed supplements. See accompanying table for other feed sales.

NORTH DAKOTA COMMERCIAL FEED SALES REPORTED FOR 1960

	Tons
Poultry feeds	
Chicken feeds (complete)	9,470
Chicken feeds (supplements)	4,381
Turkey feeds (complete)	10,274
Turkey feeds (supplement)	4,480
Swine feeds (complete feeds)	24,536
Swine feeds (supplements)	3,077
Beef cattle feeds (complete)	10,800
Beef cattle feeds (supplements)	11,315
Dairy feeds (complete feeds)	3,624
Dairy feeds (supplements)	3,002
Calf feeds	1,347
All-purpose feeds	503
Dog and cat foods (dry)	843
Dog and cat foods (canned)	734
Other animal feeds	1,063
Beet pulp	2,944
Soybean meal	761
Meat and bone meal	966
Wheat by-products	48
Mineral feeds	1,162
Iodized salt	308
Sulphurized salt	195
Mineralized salt	2,007
Oyster shell	2,293
Total tons	*100,133

*Tonnage tax paid on this total.

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YOU can be here January 1, 1962!

Win a Rose Bowl Trip

by using your skill in formulating
feeds with vitamin A

ENTER NOW!

and win this all-expense-paid trip for two to sunny California for the exciting Rose Bowl weekend

Every qualified entrant will receive a handsome monogrammed desk pen set.

And you may discover how to save your company substantial money in vitamin A fortification, as well

Here's the way to test your knowledge of vitamin A and feed fortification . . . and win a valuable prize as well. The top prize—a Rose Bowl trip for two (or its cash equivalent)—includes a weekend at a luxury hotel, a tour of Disneyland, all travel arrangements and $100 for other expenses.

You get all this, if you win, plus two top-location tickets for the famous Rose Bowl game on January 1, 1962, and tickets for seats on the Rose Bowl Parade Route. And every qualified contest entrant will receive a pen set for his office or home desk. This handsome set will be monogrammed with your initials.

You'll be testing your skill and judgment against every other feed expert who enters. Enter now for your chance at the big trip.

Why this contest

Vitamin A is one of the major limiting nutrients in livestock and poultry feeding today. And as more research is carried out, vitamin A has been discovered to play an increasing part, not just in growth, but in disease conditions as well.

This contest is one method of focusing attention on this vital ingredient in feeding—and formulating—success. And perhaps it can help you save your company a substantial amount of money at the same time.

How to Win the Rose Bowl Trip

- Solve the problems, using as your guide the directions provided.
- In the first problem you should fortify the ration with the vitamin A source which is the most economical and determine the savings resulting from this.
- The second problem is to select the Pfizer Vitamin A Palmitate in Gelatin with the potency that is most economical.
- The third problem involves calculating vitamin A requirements and fortification levels for a beef supplement. This problem will be judged not only on the decisions you make but upon your reasons for selecting the course of action.

CONTEST RULES:

- The Rose Bowl trip for two will be awarded to the entry which, in the judges' opinion, has best calculated vitamin A requirements and costs.
- Every qualified entry will receive a desk pen set.
- Contest starts now. Entries must be postmarked by November 22nd and received by November 30th. The Rose Bowl trip will be awarded shortly thereafter and prizes will be mailed to all qualified contestants.
- Contest is open only to personnel of companies in the feed industry. Not eligible are employees of Pfizer or their advertising agencies and their families.
- A numerical answer must be provided for all blanks in questions.

Only one entry per person. Ask your Pfizer representative for extra entry blanks or write Pfizer in New York.

Submit all calculations and reasoning on separate sheets. Neatness as well as accuracy will be a factor.

All entries will be judged by outstanding authorities in the field of animal nutrition and the judges' decision will be final.

HERE ARE THE PROBLEMS

1

A feed manufacturer is asked to produce a crumblized layer ration with the following ingredients:

Corn	1,440
Alfalfa meal (17%)	50
Soybean meal (50%)	260
Fish meal (60%)	100
Vitamin, mineral, antibiotic pre-mix	150
	2,000 lbs.

The alfalfa meal contains 60 milligrams of carotene per lb. and the corn 0.7 milligram per lb.

a. With the carotene conversion of 1 microgram of carotene per unit of vitamin A for layers, how much vitamin A does this ration supply per ton?

_____ units per ton

b. Recommended levels of vitamin A per lb. of layer feed are 2,000 to 4,000 units. For this problem, use 4,000 units per pound. How many additional units of vitamin A are needed per ton of feed?

_____ units per ton

c. The feed manufacturer above is considering two sources of vitamin A: Fish liver oil, containing 10,000 units of vitamin A per gram, or Pfizer Vitamin A-250 Palmitate in Gelatin, containing 250,000 units of vitamin A per gram.

Using fish liver oil or using Pfizer Vitamin A-250 Palmitate in Gelatin, how many lbs. of vitamin A supplement are needed to fortify a ton of the above ration?

Fish liver oil (1) _____ lbs.

Pfizer Vitamin A-250 Palmitate in Gelatin (2) _____ lbs.

d. Samples of the crumbles containing fish liver oil or Pfizer Vitamin A Palmitate in Gelatin were analyzed after seven weeks (they had been in the mill two weeks, in the dealer's store a month, and in the farmer's feed bin for five days).

The assays showed this percent of vitamin A retention:

Carotene 45%

Fish liver oil 63%

Pfizer Vitamin A-250 Palmitate in Gelatin 84%

Using fish liver oil, or using Pfizer Vitamin A-250 Palmitate in Gelatin, how many lbs. of vitamin A supplement are needed to compensate for the storage losses described above?

Fish liver oil (1) _____ lbs.

Pfizer Vitamin A-250 Palmitate in Gelatin (2) _____ lbs.

e. Many years of research in several species have shown that vitamin A oils are not absorbed as efficiently by animals and poultry as vitamin A dispersed in gelatin. Technical literature reports superiority of gelatin-stabilized vitamin A over fish oils, varying from 113% to 423%, based on liver storage. For this problem, a value of 60% is used to compare the biological availability of fish liver oil to that of Pfizer Vitamin A-250 Palmitate in Gelatin.

How many lbs. of fish liver oil would be needed per ton just to bring the liver storage level of the birds up to that provided by Pfizer Vitamin A-250 Palmitate in Gelatin in the same ration?

Added fish liver oil _____ lbs.

f. Taking into consideration all of the factors previously described, what is the total number of pounds of fish liver oil needed per ton of the above ration?

(1) _____ lbs.

Taking into consideration all of the factors previously described, what is the total number of pounds of Pfizer Vitamin A-250 Palmitate in Gelatin needed per ton of the above ration?

(2) _____ lbs.

g. If the price of the above fish liver oil is 31¾¢ per lb. and the price of Vitamin A-250 Palmitate in Gelatin is $10.22 per lb., what is the cost of fortifying a ton of the above feed with—

Fish liver oil (1) $_____ per ton

Pfizer Vitamin A-250 Palmitate in Gelatin (2) $_____ per ton

h. Assuming an annual production of 15,000 tons of the above layer crumbles, what will be the total yearly savings, using the more economical vitamin A source?

$_____ per year

CUT ALONG DOTTED LINE

USE THIS ENTRY BLANK

Enter your answers to the problems here. The answer spaces are keyed to the problems. Attach work sheets showing all calculations and reasoning.

PROBLEM 1

a. _____ units per ton

b. _____ units per ton

c. (1) _____ lbs.

(2) _____ lbs.

d. (1) _____ lbs.

(2) _____ lbs.

e. _____ lbs.

f. (1) _____ lbs.

(2) _____ lbs.

g. (1) $_____ per ton

(2) $_____ per ton

h. $_____ per year

PROBLEM 2

a. $_____

b. (1) Most economical source: _____

(2) Savings per 130 tons: _____

PROBLEM 3

(Attach calculations and reasonings for your answer)

2 You are making a pre-mix for a broiler ration you are manufacturing. The pre-mix will include vitamin A at the level of 400,000 units per pound and will be added at the level of 20 lbs. per ton of feed.

a. You have these Pfizer Vitamin A Palmitate in Gelatin products in your warehouse:

	U. S. P. Units Per Pound	Price per lb.
A-30-P	13,620,000	$ 1.30
A-250-P	113,500,000	$10.22

What will be the savings based on an annual production volume of 12,750 tons of broiler feed by using Pfizer Vitamin A-250 Palmitate in Gelatin?

$_____

b. You are making a vitamin A pre-mix and can use either A-30-P or A-250-P (see **a.**). Assume labor and overhead costs of $15.00 per ton and diluent costs of 3¢ per pound. Which source is most economical and what are the savings per 130 tons of pre-mix?

Most economical source (1) _____

Savings per 130 tons (2) $_____

3 A feed manufacturer receives an order for 6 tons of a supplement for fattening cattle containing the following ingredients:

30% Cattle Supplement (Fed at 2 lbs./head/day)

Ingredient	30% Supplement Pounds per ton
Alfalfa hay (sun-cured)	300
Milo	280
Cottonseed meal	500
Soybean meal, 44%	660
Cane molasses	200
Antibiotic, vitamins, trace minerals	60
	2000 lbs.

In addition to the above supplement, cattle are also receiving a free-choice mixture of barley and milo.

The alfalfa hay used in the above formula contains 17% protein and 10 milligrams of carotene per pound. How many lbs. of Pfizer Vitamin A-250 Palmitate in Gelatin, which contains 113,500,000 U.S.P. units per pound, must the manufacturer add to bring this ration up to optimum vitamin A level as recommended by leading universities?

_____ lbs.

(NOTE: This may not be as easy as it looks. You should take into consideration such things as vitamin A status of the animal, carotene conversion ratio, the optimum level of vitamin A per head per day, the length of time supplement will be stored, the composition of the rest of the ration, etc.).

SHOW CALCULATIONS AND REASONS FOR YOUR DECISIONS ON SEPARATE SHEETS ATTACHED TO YOUR ENTRY BLANK.

CUT ALONG DOTTED LINE

ENTER NOW! **Mail to:**

Vitamin A Contest
Chas. Pfizer & Co., Inc. Dept. A.
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New York 17, N. Y.

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Job Title_____

Feed Company_____

Address_____

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Science for the world's well-being®

ANRC Will Hold Its Annual Meeting in Washington Nov. 1

WASHINGTON — Annual meeting of the Animal Nutrition Research Council will be held at the Shoreham Hotel here Nov. 1.

The program chairman for the meeting is Dr. H. L. Wilcke of Ralston Purina Co., and Dr. Stanley R. Ames, Distillation Products Industries, chairman of ANRC, will preside, according to announcement from the council.

In addition to reports from the technical projects committee headed by Dr. F. H. Bird, the morning session includes a discussion of progress in the chick edema problem by Dr. Leo Friedman, Food & Drug Administration, and an address on problems in the use of laboratory animals for toxicity studies by Dr. Kenneth Morgareidge, Food and Drug Research Laboratories, Inc.

The afternoon session will feature a symposium on vitamin A and carotene for ruminants. Participants will be Dr. H. D. Faton, University of Connecticut; Dr. A. L. Neumann, University of Illinois; Dr. W. H. Pfander, University of Missouri, and Dr. Stanley R. Ames. Moderator will be Dr. R. C. Nesheim, Quaker Oats Co.

Speaker for the luncheon will be Dr. Max Milner, Food Conservation Division of UNICEF, who will discuss United Nations' efforts in meeting protein food needs.

'Family-Size' Turkeys Iowa Firm's Specialty

BELMOND, IOWA—Formation of a turkey growing firm here to produce 10 lb. Broad Breasted White Turkeys has been announced by a group of local business men.

Belmond Industries, Inc., expects to market 125,000 of the "family-type" turkeys annually. The turkeys will be marketed at 15 weeks of age, according to Merlyn Townsend, manager.

The firm has erected six 50 by 200 ft. buildings south of here, just across U.S. Highway 69 from a General Mills, Inc., feed mill, which will provide the feed.

Production plans are for 5,000 birds to be marketed every two weeks. Company officials say the birds will go to Butterfield (Minn.) Produce.

Chairman of the board of the new corporation is Ellis B. Smith, turkey grower and hatcheryman. President of the firm is Kenneth L. Kinseth, owner of a plumbing and heating business.

Michigan Group Plans Dec. 7-8 Convention

GRAND RAPIDS, MICH. — The 28th annual convention of the Michigan Feed & Grain Dealers Assn., Lansing, Mich., will be held Dec. 7-8, at the Pantlind Hotel in Grand Rapids.

Convention theme will be "The Challenging Decade Ahead." Among the featured speakers will be Paul Sanders, head of quality control for Elanco Products Co., Indianapolis, Ind., a division of Eli Lilly & Co.

Mr. Sanders' talk is entitled "Food & Drug in Today's Feed & Grain Business." Mr. Sanders joined Ely Lilly in 1956 after serving seven years with the Food & Drug Administration. During his time with FDA, he served as a new drug officer in Washington, and as an analyst with FDA's division of pharmaceutical chemistry.

The two-day event will also feature industry exhibit displays. For booth space reservations, contact Ed Baur, program chairman, 5121 Bronson Blvd., Kalamazoo, Mich.

Formaldegen Patent

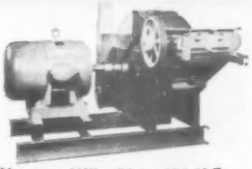
VINELAND, N.J.—A patent covering the new Vineland Formaldegen and its uses by the poultry industry has been issued to Vineland (N.J.) Poultry Laboratories by the U.S. Patent Office, Washington.

The patent, "Poultry Fumigation Process," covers the use of Formaldegen in destroying viruses and bacteria in poultry houses and equipment such as incubators, hatchers, trucks, crates, nests and the pre-incubation fumigation of hatching eggs. It is also said to be effective against lice, mites, moths, ticks, fleas and mosquitoes in the egg, larva and adult stages.

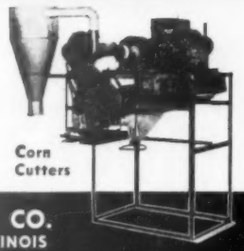
Formaldegen is a fine white powder that contains 91% formaldegen gas, Vineland officials said. The gas is released by heat, with a common electric frying pan the most common and useful instrument. The amount of heat controls the rate of release of the formaldehyde gas.

BIG CHIEF

Pit Augers • Elevator Legs • Mixers • Scalpers • Graders • Earcorn Crushers • Steel Bins



Hammer Mills 50 to 150 H.P.



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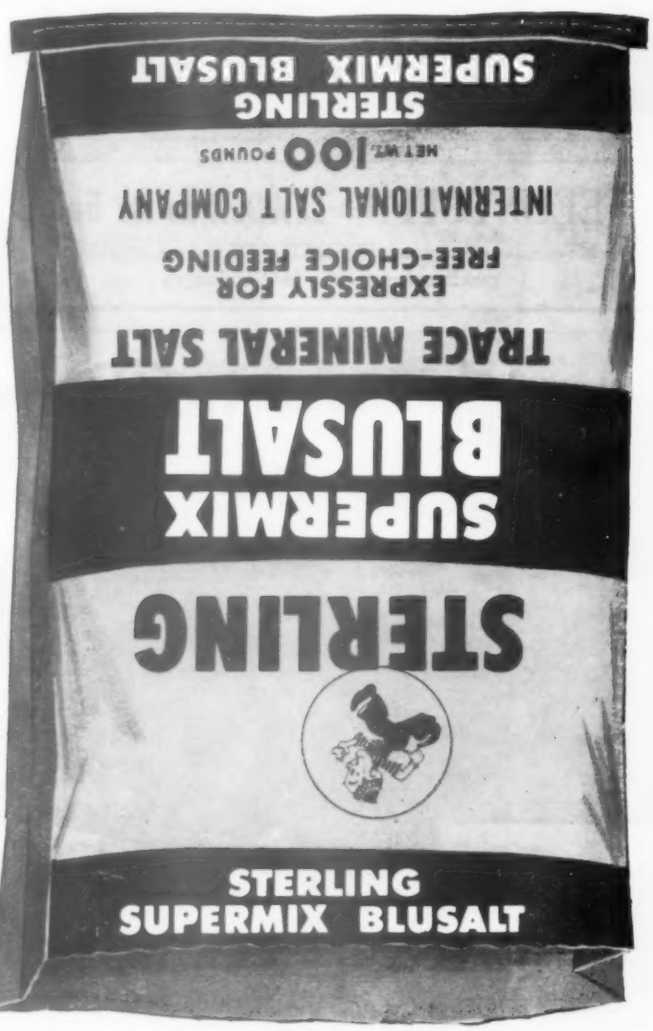
Besides Salt ?



Plenty: For instance, the experience and know-how of top salt nutritionists who see to it that Sterling Supermix Blusalt and our Feed and Farm Salt products are top quality, and that the trace element compounds used are stable, compatible with vitamin pre-mixes and available to livestock and poultry. Plus the advice of experienced field service personnel, on call to help you solve special feed mixing and salt handling problems. Plus the advanced engineering of Sterling's own mixing equipment, guaranteeing uniform blending of the seven vital trace elements with salt, the ideal carrier, resulting in even distribution throughout your feeds.

You see? You've got it in the bag: the sum of the entire resources of a company that wants to earn your business by giving you the finest salt products . . . and service.

For Sterling Farm and Feed Salt products, call our District Office nearest you:

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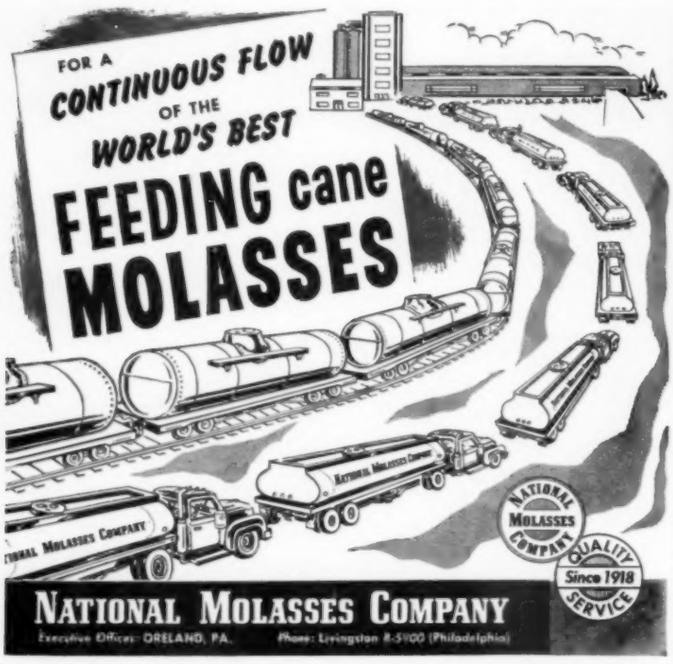

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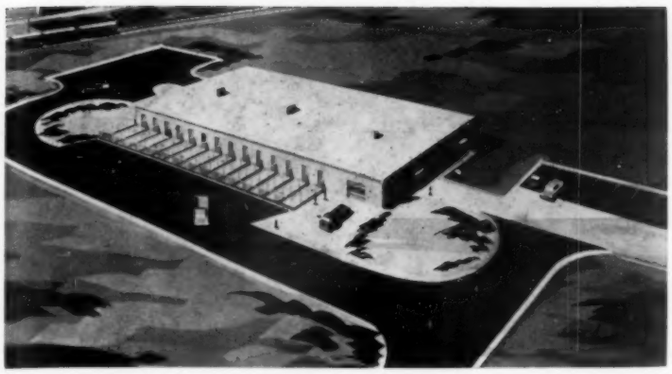

DAWE'S RESEARCH BUILDING—This is an architect's drawing of the new Dawe's Laboratories, Inc., biological research building now under construction in Chicago Heights, Ill.

Research Building Underway for Dawe's

CHICAGO — Construction is now underway on a new biological research building for Dawe's Laboratories, Inc.

The structure is located in Chicago Heights and is the first unit on land purchased by the firm for expansion of research and manufacturing facilities, according to the company's announcement. Completion of the new building is slated for Jan. 1.

The 11,000 sq. ft. one-story building will be of face brick, fireproof construction.

Included in the building will be fully temperature-controlled space designed to provide uniformity of environmental factors. There will be outside pens for small animals. The unit is designed and will be equipped to do research directed toward the development of new and improved nutritional products, Dawe's said. "Poultry and small animals will be employed in feeding tests, and the research findings applied to practical nutrition for the improved production of livestock and poultry products," the firm reported.

Dawe's Laboratories manufactures vitamins for the feed, food and pharmaceutical industries and certain industrial and fine chemicals including sodium gluconate, gluconic acid, fructose and enzymes. The company operates plants and laboratories at Chicago and Peoria, Ill.; Atlanta, Ga.; Ft. Worth, Texas; Newaygo, Mich., and Auburn, Wash. Foreign plants and laboratories are in Belgium, Italy and Mexico.

Addition of Dehydrated Alfalfa to Low Quality Hay Ups Milk Output

FT. COLLINS, COLO. — Dehydrated alfalfa added to average and below-average quality roughages will increase milk production. And the benefits of this type of supplementation will greatly increase as hay quality decreases.

Those are the results of research carried on at experiment stations by Colorado State University.

In a recent feeding trial, an experimental dehydrated alfalfa pellet processed by a new method, and conventional dehydrated alfalfa pellets were fed at the rate of 5 lb. per cow each day to two individual groups of producing Holsteins. They were compared to a third control group receiving no supplemental dehydrated alfalfa pellets.

With the addition of the 5 lb. of both types of pellets, increased milk production was noted, but only the increase from the new process pellet was found to be statistically significant. However, both dehydrated supplements resulted in increase in body weight.

During the 28-day treatment, the cows responded with the following milk production at an average butter fat test for all three groups of 3.3%: New process pellet, 45.8 lb. of milk per day; conventional pellet, 44.4 lb. per day, and controls, 43.2 lb. per day.

$2.50 PLUS PARTS

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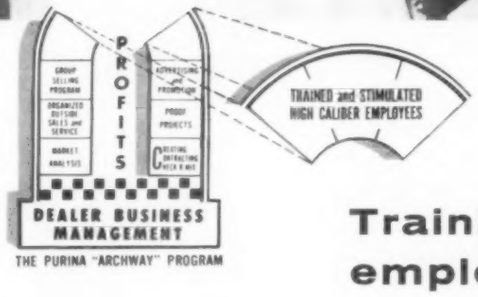
Meeting the challenge of the '60's with service

The Purina Home Correspondence Course Diploma is accepted with pride by John A. Horny (right), of Chas. Wolohan, Inc., Hemlock, Michigan. Making the presentation is Purina Salesman LaPrad.



THE PURINA "ARCHWAY" PROGRAM

Training by mail helps dealer employee to better serve farmers

Thousands of Purina Dealer employees are serving farm folks better because of Purina's Home Correspondence Course. This basic training covers products, programs and the fundamentals of selling.

The Home Correspondence Course is the foundation of Purina's extensive and thorough training program. It provides the background for on-the-job instruction, night educational meetings and advanced preparation, including the Top-Level Sales School.

Purina Dealers will tell you that the Purina Training Programs pay off in goodwill gained from better service . . . in low turnover of key employees . . . in tonnage and profit.

* * * *

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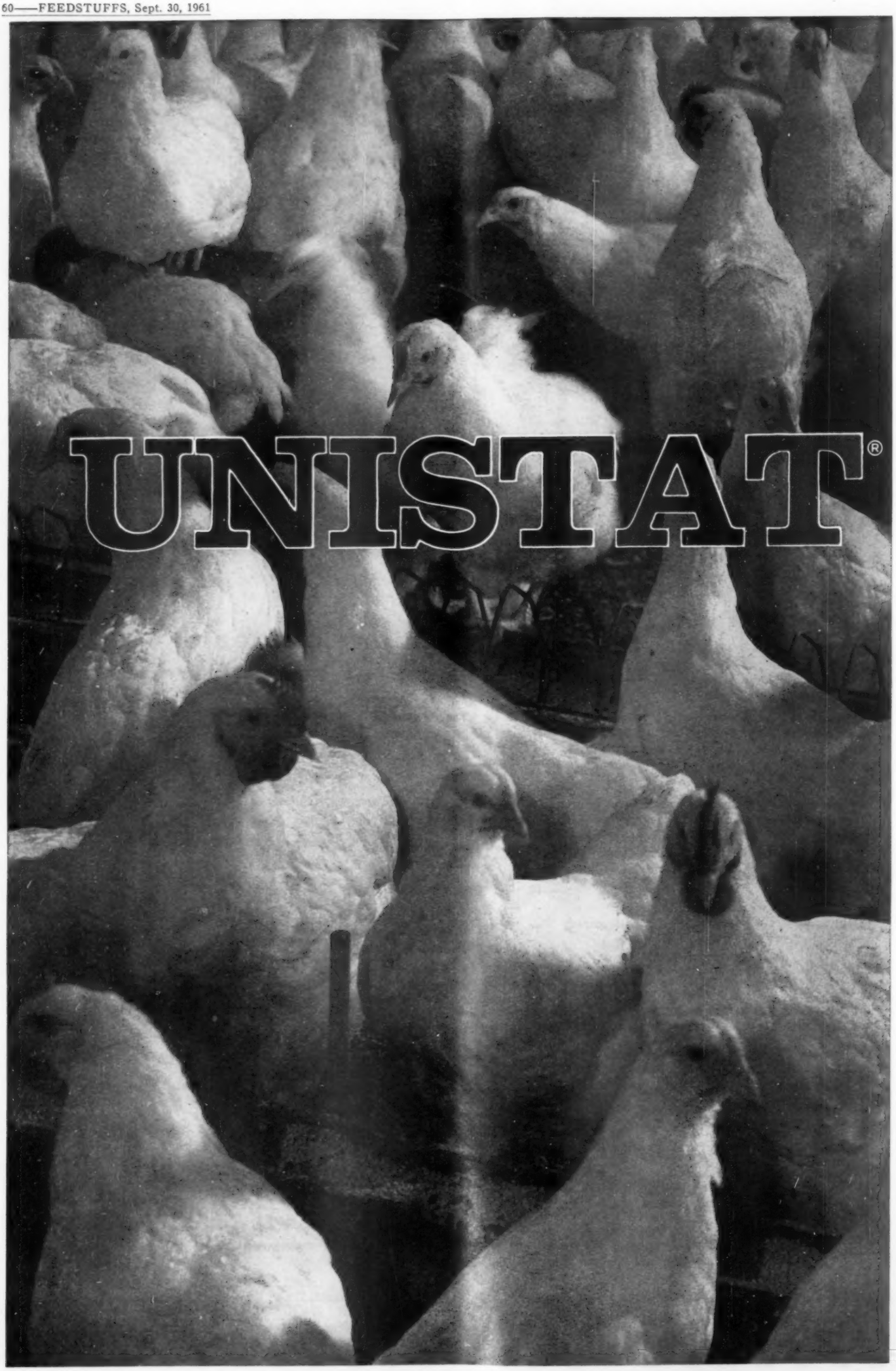
4. There's a Purina Chow especially adapted to every livestock and poultry production situation.
5. Purina offers complete programs of breeding, management, sanitation and feeding.
6. Dealers are backed by one of the world's outstanding commercial research facilities.
7. Purina provides a complete line of research-proved sanitation products.
8. A coast-to-coast network of mills serves Purina Dealers.
9. The Purina Salesman and the Dealer have a "Sales Partnership" relationship.
10. The Ralston Purina Company is the world's largest feed manufacturer.

There are progressive, independent Purina Dealers covering most areas. If you are in one of the few remaining markets where the Purina Franchise is available... and if you are interested in an outstanding investment opportunity, write: RALSTON PURINA COMPANY, Department F-93, St. Louis 2, Missouri.

ROBERT G. LaPRAD, Purina Salesman in Michigan, has found The Purina Home Correspondence Course to be a firm foundation for training Purina Dealer employees. Of 42 dealer staff people, "Sales Partner" LaPrad has presented The Home Correspondence Course Diploma to 21 and he has 11 more taking the work.

"Sales Partner" LaPrad, a former Vo-Ag teacher, follows through on all phases of the Purina educational programs, which are developed by training specialists.

PURINA...YOUR PARTNER IN SERVING ANIMAL AGRICULTURE


UNISTAT®

gives your feeds new profit benefits, also prevents coccidiosis best

Growers everywhere are looking for broiler and growing-bird feeds that do two things: (1) protect against coccidiosis and (2) stimulate fast, efficient gains. Both of these are reasons why your feed should contain Dr. Salsbury's Unistat. Unistat *prevents coccidiosis best*, under practical field conditions. Unistat . . . is more effective as a coccidiostat because of its unique combination of drugs. It also provides these other profit-making benefits no single drug can offer:

- **FASTER GROWTH.** Extensive tests involving thousands of broiler birds show Unistat chicks were *9.7% heavier* at end of 10 weeks.
- **NEED LESS FEED.** Laboratory tests show that Unistat-fed broilers needed *7.3% less feed* per pound of gain.
- **BETTER COLORING.** Shanks of both male and female broilers on Unistat showed *significantly better coloring.*

UNISTAT IS WIDELY ADVERTISED

Because of sustained advertising and promotion, your customers know of Unistat's many advantages. Make sure your feeds provide the many benefits only Unistat can offer. Write, wire, or phone for Feed Manufacturer's Guide. Or, ask for a Dr. Salsbury's representative to call personally and talk with you about Unistat, the feed additive that *prevents coccidiosis best!*

Dr. SALSBURY'S LABORATORIES
Charles City Iowa, U. S. A.

MORE THAN PRODUCTS—A SYMBOL OF SERVICE

Texas Event to Cover Ruminant Feed Topics

COLLEGE STATION, TEXAS—Ruminant feedstuff carbohydrate analysis and some of its facts and fallacies will be described during the annual Texas Nutrition Conference Oct. 4-6 at Texas A&M College.

The speaker will be Dr. William Ellis, assistant professor in A&M's department of animal husbandry. His subject will be of interest to feed manufacturers and beef cattle and sheep feeders.

The program this year will feature a section of talks focusing on beef cattle feedlots and feeding operations.

In addition to current systems of analysis and their faults, Dr. Ellis will discuss some possible improved methods of determining carbohydrates.

Dr. J. R. Couch, program chairman and professor in the college's poultry science department, said talks this year will emphasize applied nutrition and practicality.

Conference sponsors are Texas A&M, Texas Agricultural Experiment Station and Texas Agricultural Extension Service in cooperation with the Texas Grain & Feed Assn. and Midwest Feed Manufacturers Assn.

Feed Grain Council Personnel on Tour

MINNEAPOLIS—Three staff members of foreign offices of the U.S. Feed Grain Council have visited here during the week, according to Minneapolis members of the council.

Sept. 17 through 19 Mr. Graziano of the European office of the council headquartered in Rome, and Norman Comben, who heads the British office in London, were visitors here. Sept. 18 they visited grain elevators in the Duluth, Minn., harbor and watched the loading of lake and ocean-going ships. Sept. 19 they were in Minneapolis for a visit to the Grain Exchange and also took a trip to Port Cargill on the Mississippi River to see barge loading operations.

Sept. 20 Mr. Hattori, a Japanese-American wheat farmer from the Big Bend area of Washington who will open a council office in Tokyo, visited the Minneapolis Grain Exchange.

According to council representatives, the visits were for the purpose of acquainting the foreign office personnel with the situation and making them better able to answer questions they will be asked in their official capacities.

The U.S. Feed Grain Council, which has as its purpose stimulating animal and poultry husbandry throughout the world as a means of improving the human diet, has as its members: corn producers, sorghum producers, cooperative grain handlers, independent grain handlers, exporters, terminal grain handlers, feed manufacturers and feed additive producers, it was pointed out.

Study Soybean Meal Effect on Dairy Cows

EAST LANSING, MICH.—Feeding soybean oil meal did not have any apparent effect on the rate of mastitis or sterility in dairy cattle in a test at Michigan State University.

"There was no apparent difference," says Dr. Donald Hillman, dairy specialist at Michigan State, "in the milk production, incidence of mastitis or number of services required for conception between heifers fed soybean meal and those fed soybean meal and corn gluten meal as the source of protein."

"The incidence of mastitis was very low for the heifers fed both rations, and there was no apparent difference between rations," the dairy researcher said.

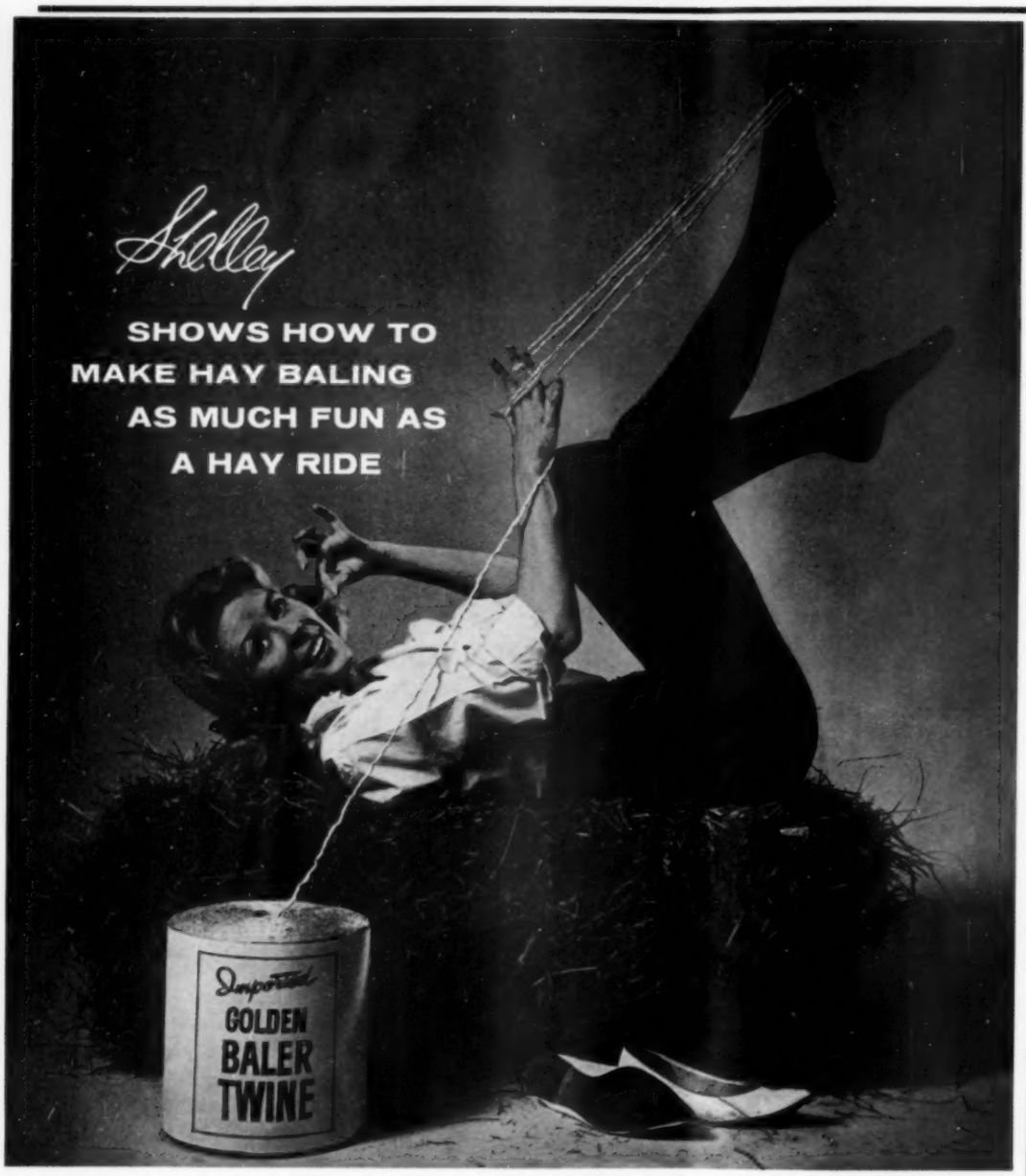
Evidence of mastitis was detected by use of the strip cup at each milking, the California Mastitis Test (CMT) and microscopic examination of milk samples monthly and at each occurrence of mastitis. Both the strip cup and CMT proved to be valuable tools for detecting mastitis, and these findings agreed closely with the microscopic examination of milk samples, Dr. Hillman says.

Dr. Hillman used 32 bred heifers in the experiment to provide cattle of known mastitis history from first calving. One-half of the heifers were fed a grain ration containing soybean meal. The others were fed a similar ration containing corn gluten meal as the source of protein.

The experiment is planned to continue for two more years, Dr. Hillman stated.

Improve and enrich your poultry and livestock feed with SUPER CAL

PURE REEF OYSTER SHELL FLOUR-FREE *TRACE MINERALS* FROM THE SEA



IMPORTED BELGIAN TWINE - 9,000 FEET TO THE BALE - 325 LB TENSILE STRENGTH

Long staple East African fibers, strong and smooth, spun on Mackhaul-Gill spinners, make a twine that's strong and smooth. No breaking. No knotting. Plus, in every bale you get the economy of 9,000 feet of twine. And every foot is treated against mildew, rot, insects, and rodents. You can stock this imported twine with the same assurance you do Shellbuilder. And you can buy a mixed car of both at carload rates! There are more ways than one to profit with Shellbuilder Company. So start now: Add twine to your shell order and order now.

GUARANTEED BY SHELLBUILDER COMPANY

SHELLBUILDER COMPANY • MARINE BUILDING • HOUSTON, TEXAS

NATURAL ROCK PHOSPHATE

FOSFORO RESEARCH - REPEAT SALES - RESULTS prove the value of FOSFORO

LET US PROVE IT TO YOU!

DARLING'S MINERALS
U.S. YARDS CHICAGO 9

Free-Choice Mineral Mix
Contains ½ steamed bone meal . . . 6% *phosphorus. Guaranteed* that your livestock will eat it *free choice.*

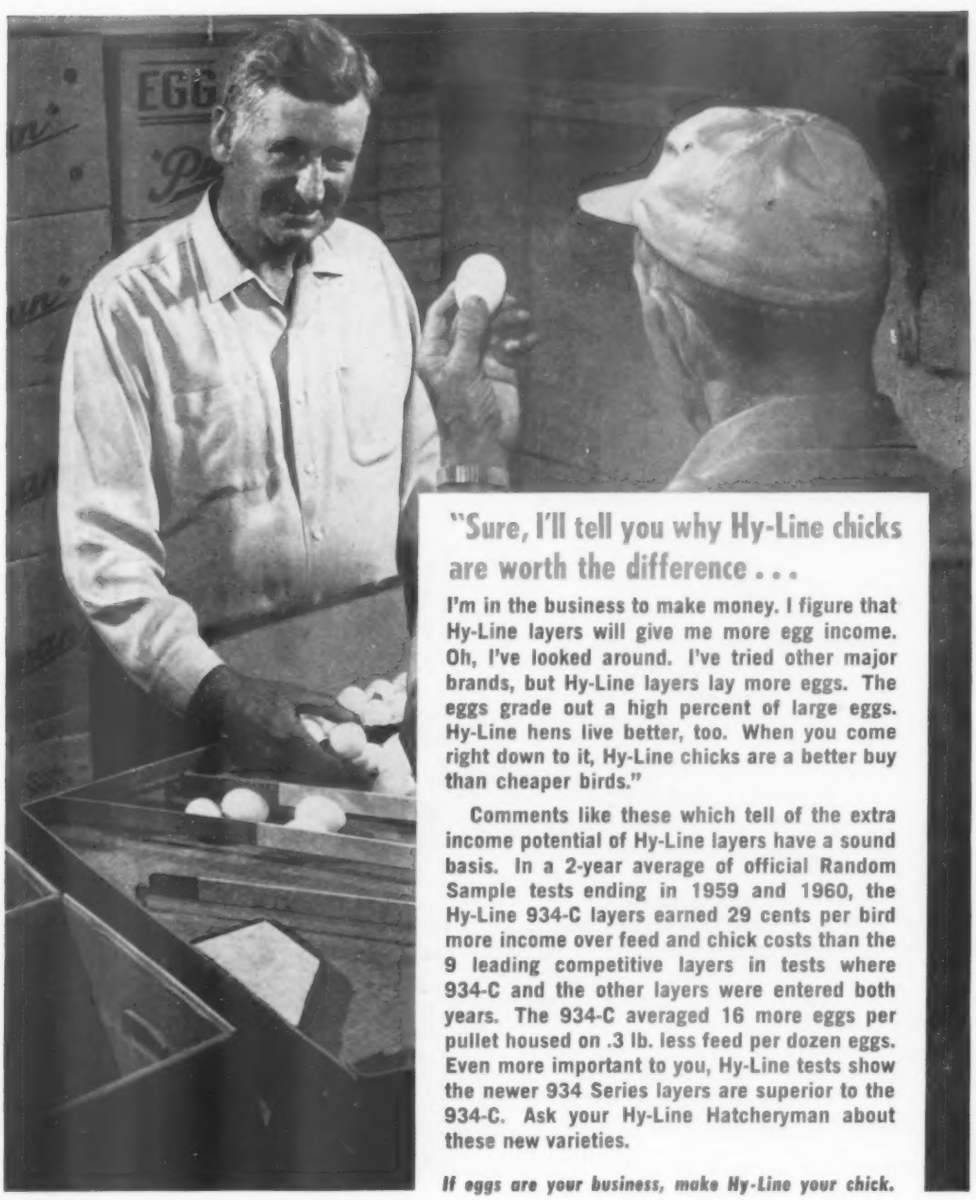
Weather-Resistant Mineral Block
. . . not only salt and trace minerals, but also the needed *calcium* and *phosphorus* (6%). *Guaranteed* palatable.

Mixing Mineral Concentrate
Contains 9% *phosphorus,* plus all necessary trace minerals. A better buy for your custom mixing.

JUST THESE 3 FILL EVERY MINERAL NEED

Hy-Line chicks have the bred-in performance that means more income in any egg laying operation

The ad reproduced below tells poultrymen why Hy-Line chicks are worth the difference. It explains why they can pay a little more for Hy-Line chicks—and still come out ahead.



"Sure, I'll tell you why Hy-Line chicks are worth the difference . . .

I'm in the business to make money. I figure that Hy-Line layers will give me more egg income. Oh, I've looked around. I've tried other major brands, but Hy-Line layers lay more eggs. The eggs grade out a high percent of large eggs. Hy-Line hens live better, too. When you come right down to it, Hy-Line chicks are a better buy than cheaper birds."

Comments like these which tell of the extra income potential of Hy-Line layers have a sound basis. In a 2-year average of official Random Sample tests ending in 1959 and 1960, the Hy-Line 934-C layers earned 29 cents per bird more income over feed and chick costs than the 9 leading competitive layers in tests where 934-C and the other layers were entered both years. The 934-C averaged 16 more eggs per pullet housed on .3 lb. less feed per dozen eggs. Even more important to you, Hy-Line tests show the newer 934 Series layers are superior to the 934-C. Ask your Hy-Line Hatcheryman about these new varieties.

If eggs are your business, make Hy-Line your chick.

Hy-Line layers rank first in 3 of the first 6 official Random Sample Tests completed in 1961
(Of all tests announced prior to Sept. 1)

Hy-Line 934-H ranks first in income over feed and chick costs in the Arizona, North Carolina and Texas tests.

Hy-Line® Precision Genetics

Hy-Line Precision Genetics uses inbreeding, hybridizing, and poultry blood-typing to develop Hy-Line layers that are outstanding for production, livability, feed efficiency, and large, good-quality eggs.

Hy-Line® CHICKS

Des Moines, Iowa

H-1R

Hy-Line is a registered trademark of Pioneer Hi-Bred Corn Co. Hy-Line is the brand name; the number (and letter) identifies the variety.

Farm Bureau Directors Lash Out at Freeman's 'Corn Dumping Plan'

CHICAGO—The board of directors of the American Farm Bureau Federation has gone on record severely criticizing Orville L. Freeman, secretary of agriculture, for his announced "intention to dump government-held surplus corn on the market at a time when farmers are harvesting and selling a near-record crop."

The Farm Bureau directors, meeting in Chicago, issued a formal statement charging that "heavy government sales from surplus stocks have already hurt corn prices, and to step up government sales now when corn is ready to be harvested in the field will seriously disrupt and demoralize the whole feed grain market."

The board said that "even without competition from government surpluses, corn prices would be under heavy pressure from record high yields and the huge quantity of corn not eligible for price support loans under the administration's new feed grain law."

The board interpreted the secretary's latest move as a "supply management" order issued to penalize the three out of five corn farmers who did not comply with the feed grain law, but which will also penalize those who did comply as well.

"Many farmers who complied do not have storage facilities necessary to participate in the program. Some will be unable to participate because of the moisture content of their grain —a situation which could become worse in the event of continued heavy rainfall or early frost," the board's statement said.

A little-publicized fact, it noted, is that most cooperating growers will be eligible for price supports on only a limited number of bushels per acre, and that as a result most cooperators will have sizeable quantities of corn not eligible for price supports.

The board further charged that "the effects of such government dumping will not by any means be limited to feed grain producers, and government action to depress feed prices will lead to overproduction and lower incomes for livestock, poultry and dairy producers."

Seed Firm Expands

NORTH LITTLE ROCK, ARK.—The Adkins-Phelps Seed Co., leading wholesale and retail seed firm which has been active in Arkansas poultry and egg expansion, has started expansion of its seed-cleaning and storage plant.

This expansion will double the storage capacity and will be completed in November, company officials said. After its completion, Adkins-Phelps will have a 390,000 bu. storage space.

Illinois Microscopy Course Completed

SPRINGFIELD, ILL. — Several "firsts" were claimed for a school for feed microscopists held recently in Springfield. The six-day school was sponsored by the Illinois Department of Agriculture, division of feeds, fertilizers and standards, and was held in the new Illinois Building at the state fairgrounds.

This was the first time that Canada and the U.S. joined to teach a school for feed microscopists. It also was the first time that a feed company was asked to join microscopy association members from state control laboratories to teach a microscopy course.

Fifteen students were solicited to attend the school, and 14 responded and received their diplomas. Students came from Delaware, Ohio, Wisconsin, Minnesota, Iowa and Illinois. The newest methods in microscopy were taught by Florence Cottee, senior microscopist from Alberta, Canada; Bob Bax, senior microscopist from Ralston Purina Co., and Ward Creswell, Illinois state feed microscopist.

The course included identification of cereal grains, meat products and oil meal products; spot testing for trace minerals, certain drugs and antibiotics; and flotation of feed ingredients and mixed feeds. Forty hours of individual instruction were given each student.

At the completion of the course, the students were given 10 samples that they are to complete in 1961-62. These samples are feed mixtures, and the students will analyze them for ingredient identification and percentage of ingredients. This is also a collaborative study, with the results of all students to be sent to each student.

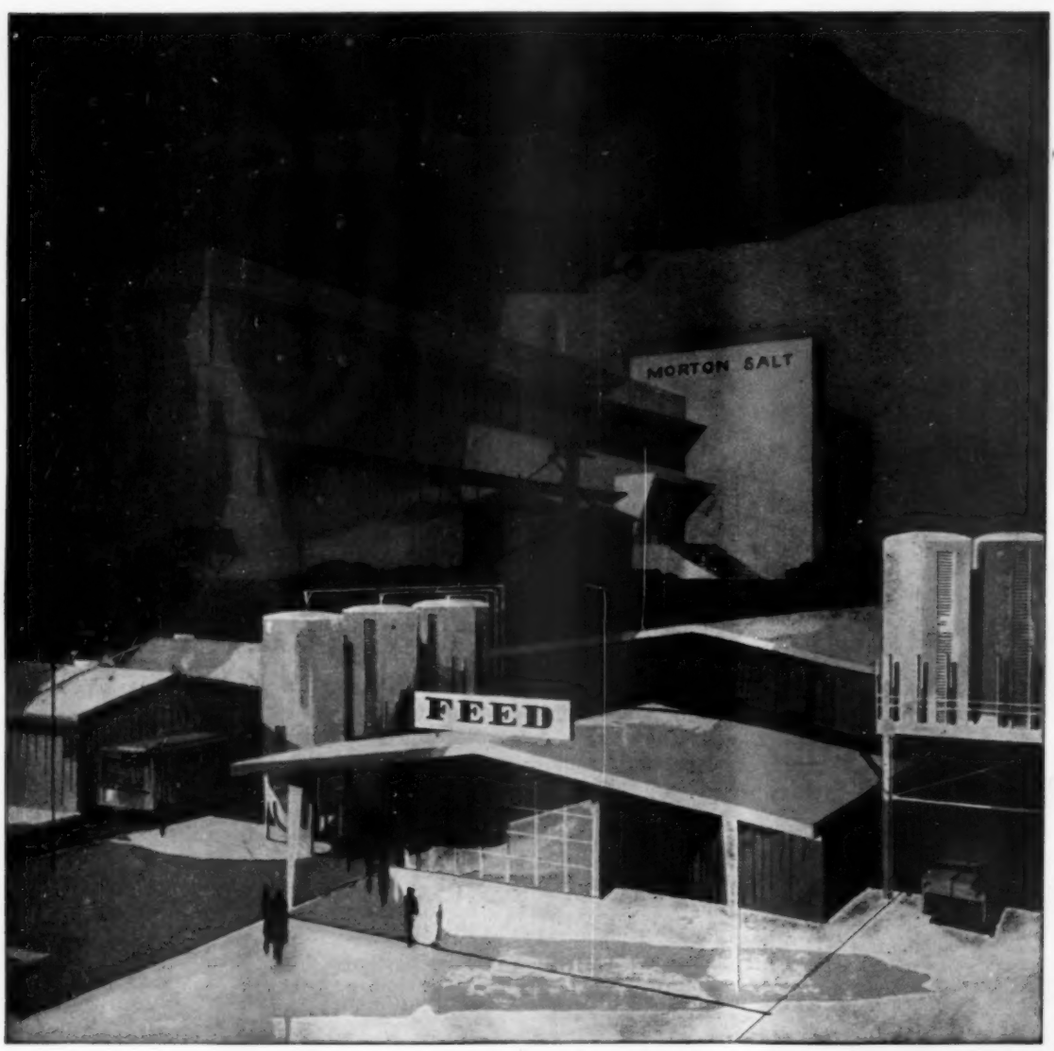
Print 'Profitable Dairy Management' Edition

CAYUGA, N.Y.—The 11th edition of "Profitable Dairy Management" is now ready for distribution, according to Dr. Gilbert H. Porter, director of dairy research, The Beacon Milling Co., Spencer Kellogg division of Textron, Inc., Cayuga.

The new book, authored by Dr. Porter, L. X. Mix and W. D. Lachbrook, is said to contain 192 pages of the latest scientific and practical information on the feeding, breeding and management of dairy cattle.

New topics discussed in the book include: "The Feeding and Handling of Cows With High Inherent Production Potential," "Beacon Dairy Feed Programming," "Veal Production," and "Various Hay Harvesting Methods and Equipment in Review."

Among revised topics are: "What Makes Profitable Dairying," "Herd Improvement Through Breeding," "Putting Nutrition Into Practice," "The Feeding and Management of Herd Replacements From Birth to the Milking String," and "The Farm Roughage Problem."



LIKE HAVING A SALT AND TRACE MINERAL LABORATORY
RIGHT IN YOUR OWN BACK YARD!

When you deal with Morton Salt Company, your questions about salt and trace mineral nutrition will be answered quickly and correctly—by specialists with a background of more than 30 years experience in studying and evaluating salt and trace mineral requirements for formula feeds.

Morton's continuous study and testing program, combined with rigid quality controls, also assures you mixing salts that give optimum results in your feeds. As a Morton customer, you know the best in scientific manpower, technical facilities and modern production methods are always working for you.

In addition to technical help on salt and trace minerals for formula feeds, Morton offers a complete line of Mixing Salts—Multi-Purpose, Swine and Poultry Mixing. And Morton Mixing Salts are available anywhere in the country. For more information, ask your Morton representative, or write:

MORTON SALT COMPANY
INDUSTRIAL DIVISION
Dept. F-9, 110 N. Wacker Drive, Chicago 6, Ill.

NEED NEW GRAIN HANDLING EQUIPMENT? LEASE IT!

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NATIONWIDE LEASING COMPANY
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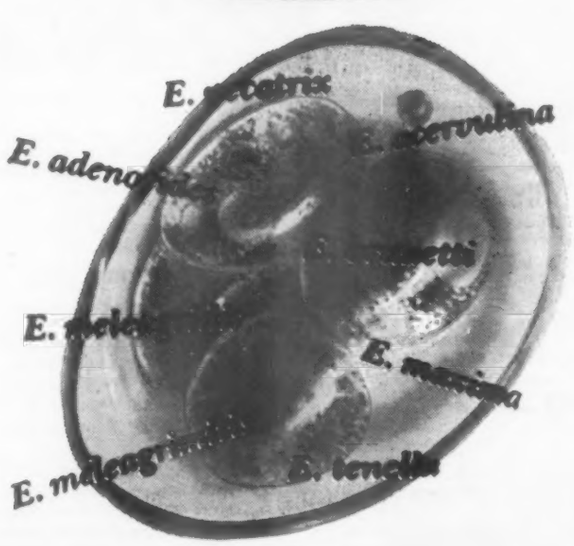
Write today! Find out why IT PAYS TO LEASE!

SQ



TO TREAT COXY OUTBREAKS ...EFFECTIVE AGAINST ALL IMPORTANT COCCIDIAL SPECIES

No other drug can match the effectiveness, safety, and economy of S.Q. in treating outbreaks of coccidiosis in chicks, poults, pullets—*and* birds in production. Unlike other drugs, S.Q. works best during the all-important 72- to 96-hour period after infection, when coccidia are most vulnerable to medication.

S.Q.—used promptly at therapeutic levels—will check coxy outbreaks . . . cut losses by holding mortality and stunting to a minimum . . . keep flocks on feed until the outbreak is under control.
Merck Chemical Division, Merck & Co., Inc., Rahway, N. J.

S.Q.® *with* THE MERCK MARGIN OF SURETY

® TRADEMARK OF MERCK & CO., INC., FOR SULFAQUINOXALINE.

WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7694—Equipment Leasing Plan

A new brochure outlining the details of its new Open Line Lease Plan for extra-long terms has been published by the Nationwide Leasing Co.

The brochure contains charts showing leasing costs from 3 to 12 years. Also included in the brochure is an explanation of which companies qualify for 3 to 7 year leases and which qualify for 8 to 12 year leases. Full explanation of the features of the Open Line Lease Plan is included.

The plan is said to be specially designed for companies with a tangible net worth of $½ million or more. It permits them to plan their equipment acquisition program over a period of up to 12 years, starting with a minimum of $25,000 in equipment, say company officials.

For a copy of this bulletin, check No. 7694 on the coupon and mail.

No. 7693—Lightweight Bin Vibrator

A miniature lightweight vibrator—the 7½ oz. BD-13—has been added to the line of Vibrolator Vibration Inducers manufactured by the Martin Engineering Co.

The BD-13 will handle up to 10 cu. ft. capacity bins. It is used to bring powdered, particulate or crystalline materials out of hoppers, down chutes and through screens.

Silent operation is said to be inherent to the BD-13, which is fitted with a replaceable jet for air economy. Maximum air consumption is 6 cu. ft. per min. (free air at 80 psi), declining as the requirement for high speed operation declines and air pressure is reduced. It will operate on as little as 5 psi, says the manufacturer.

A chrome steel ball, driven in an orbit on replaceable raceways of hardened high-alloy steel, is said to produce infinitely controllable frequencies from 0 to 22,000 cycles per minute.

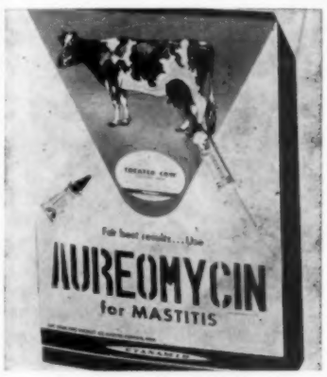
The steel ball is the only moving part in the BD-13, which requires no auxiliary equipment such as lubricators or filters. It is described as safe to use in explosive atmospheres. Operation in high ambient temperatures does not harm the unit.

Special lug design permits mounting in any position with a single bolt. Natural aluminum finish is available for use where paint or enamel may be objectionable. For additional information, check No. 7693 on the coupon and mail.

No. 7695—Promotion For Mastitis Medication

The American Cyanamid Co. has announced that it is repeating a fall promotion for Aureomycin for mastitis that is said to benefit farm supply dealers catering to dairymen.

During this promotion, dairymen will get "one free with five" when purchasing either Aureomycin Mastitis Suspension or Ointment, or Targot Mastitis Suspension or Ointment. Each gross is packed as 24 branded sixes. Each of the 24 packs will contain a free item, but dealers will pay for only 120 out of each gross. Each six-pack also includes six "treated cow" stickers to identify cows that



have been treated for mastitis. The stickers give the date of treatment so that the period for withholding milk is easily remembered.

Dealers purchasing a minimum of three gross will get a free action display to be set on counter, table or vaccine refrigerator top. Operated by a flasher light, the display is said to capture attention immediately.

For additional information, check No. 7695 on the coupon and mail.

No. 7697—Equipment Brochure

The availability of literature on its advanced processing equipment has been announced by Edw. Renneburg & Sons Co. A two-color booklet contains pictures and other illustrations showing the company's line of equipment.

Described within the pages of this 16-page brochure are air pollution control systems, direct and indirect cookers and digestors, granulators, mixers and mills, presses, extractors and counter-current washers. Also discussed are pilot plant units, reactors and roasters and distillation towers.

For additional information including a copy of this brochure, check No. 7697 on the coupon and mail.

No. 7692—Fluid Pump

A new chemical pump for automatic delivery and positive metering of corrosion control chemicals and other fluids of a similar nature is now being offered by the Clayton Manufacturing Co.

Featuring a straight through pumping member, the Clayton pump has no pockets to trap air and cause non-uniform meterings. It delivers a uniform rated capacity on each initial start, say company officials.

The pump is available in two models, one with a rated capacity of 1 gph at 0 to 15 psi, and the other .8 gph at 15 to 100 psi.

Of packless design, the pumping element and check valves are of synthetic rubber. The motor driven pump is actuated hydraulically with all mechanical parts submerged in oil.

The pump can be controlled automatically to keep a balance with feed water conditions when utilized in boiler systems or similar applications. It is designed for fixed capacity with no pumping variables and chemical solutions may be altered to suit the desired corrosion control.

For additional information, check No. 7692 on the coupon and mail.

No. 7696—Dried Beet Pulp

The I. S. Joseph Co., Inc., has announced the availability of a new brochure on dried beet pulp.

Contents of the brochure include explanations on why beet pulp is an economical and practical feed that increases the value of rations used for milk production and fattening of livestock.

Dried beet pulp is described in the brochure as having a guaranteed analysis of not less than 8% crude protein, 0.3% crude fat, 22% crude fiber, and 53% nitrogen free extract. The pulp feed is said to be composed only of the residue of sugar beets dried after the extraction of sugar.

Other sections of the booklet describe the absorption characteristics of dried beet pulp, how to store and feed it and recommended procedures for its use in fattening livestock and producing milk. Dried beet pulp is described by company officials as an ideal silage preserver.

For additional information including a copy of the brochure, check No. 7696 on the coupon and mail.

No. 7698—Pneumatic Conveying System

Sprout, Waldron & Co., Inc., has announced development of a positive and negative pressure portable gas engine driven pneumatic conveying system for transferring granules or

powders from bulk cars to trucks or bins.

The unit, which is also available with an electric motor drive, may also be used for moving materials from one point to another.

For additional information, check No. 7698 on the coupon and mail.

No. 7685—Tramp Iron Drum Separators

The availability of its redesigned and expanded line of permanent magnetic drum separators for eliminating tramp iron contamination has been announced by Eriez Manufacturing Co.

The largest drums, 20 and 36 in. diameters, are said to efficiently remove all large and small iron particles from a wide variety of materials —even with flowing rates up to 25,600 cu. ft. per hour. Smaller size drums have been redesigned to increase their capacities up to 45%, the manufacturer said. The number

Send me information on the items marked:

- ☐ No. 7685—Drum Separators
- ☐ No. 7692—Fluid Pump
- ☐ No. 7693—Bin Vibrator
- ☐ No. 7694—Leasing Plan
- ☐ No. 7695—Mastitis Medication
- ☐ No. 7696—Dried Beet Pulp
- ☐ No. 7697—Equipment Brochure
- ☐ No. 7698—Conveying System

COUPON NOT VALID AFTER 60 DAYS

Others (list numbers) .....

NAME .....

COMPANY .....

ADDRESS .....

CLIP OUT — FOLD OVER ON THIS LINE — FASTEN (STAPLE, TAPE, GLUE) — MAIL

FIRST CLASS PERMIT No. 2
(Sec. 34.9, P. L. & R.)
MINNEAPOLIS, MINN.

BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Feedstuffs

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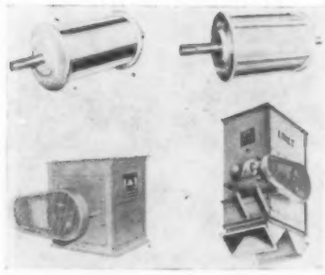
Reader Service Dept. Minneapolis 40, Minn.



of possible applications for all magnetic drums has been broadened.

The new drum separator line includes standard models with 12 to 36 in. diameters and widths from 8 to 60 in. Other sizes are available on special orders.

In addition to standard units, the manufacturer says that new heavy duty drum separators provide a heavier shell, abrasion resistant end flanges and more rugged housings.

Models H and HFP are housed magnetic separators. Model H is adaptable where vertical space is limited. Controlled feed and discharge features are provided in the Model HFP. A chute type feed hopper keeps materials and tramp iron from plunging directly onto the drum. Efficiency is said to be increased by directing material flow onto the drum shell face. Dust-tight housings are standard for both Models H and HFP. Feed control gates are adjustable from outside of housings and can be left in free-swinging position when desired.

For additional information, check No. 7685 on the coupon and mail.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number of the coupon and forwarding it to Feedstuffs.

No. 7617—Bag opening device, St. Regis Paper Co.
No. 7618—Non-hygroscopic whey powder, Bongards Cooperative Creameries.
No. 7619—Feed additive for swine, Merck & Co., Inc., chemical division.
No. 7620—Pour-on insecticide for cattle, Dow Chemical Co.
No. 7621—Receiving scales bulletin, Richardson Scale Co.
No. 7622 — Motor driven piston pump, Hypro Engineering Co.
No. 7625—Elevator leg, bucket elevator catalog, Huss & Schlieper.
No. 7624 — Weigh buggy, Leach Manufacturing Co.
No. 7625—Magnetic separator bulletin, Dings Magnetic Separator Co.
No. 7626 — Self-contained scales, Fairbanks, Morse & Co.
No. 7627—Egg grader, Big Dutchman Automatic Poultry Feeder Co.
No. 7628—Fermentation nutrients catalog, Amber Laboratories, Inc.
No. 7629—Water medication solution, Merck chemical division.
No. 7630 — Magnet for hardware disease, Arnold Engineering Co.
No. 7631—Poultry vaccine, American Scientific Laboratories, Inc.
No. 7632—Feed weigher, Leach Manufacturing Co.
No. 7633—Water medication proportioner, Vineland Laboratories, Inc
No. 7634—Dust filter bulletin, The Day Co.
No. 7635—Growth stimulant for cattle, Nopco Chemical Co.
No. 7636—Paddle conveyor unit, FMC Bulk Transport Systems.
No. 7637—Air vibrator clamp, The Cleveland Vibrator Co.
No. 7638—Chain drag, Sprout, Waldron & Co., Inc.
No. 7639—Hog house automation, Big Dutchman Automatic Poultry Feeder Co.
No. 7640—Pneumatic vibratory feeders, National Air Vibrator Co.
No. 7641 — Medication for calf scours, Dairyland Food Laboratories, Inc.
No. 7642—Diverter valves, Systems Engineering & Manufacturing Co., Inc.
No. 7643—Automatic moisture controls, The Mathews Co.
No. 7644—Pig scours literature, Hess & Clark.
No. 7645—Sealing device, Vineland Poultry Laboratories.
No. 7646 — Fabric cement, Val-A Co.
No. 7647—Grain bin sweep, Wyatt Manufacturing Co., Inc.
No. 7648—Concentrate with weatherizing agent, Lamkin Brothers.
No. 7649 — Stencil roller, Marsh Stencil Machine Co.
No. 7650—Rotary valves, The Day Co.
No. 7651 — Pneumatic feeder, National Air Vibrator Co.
No. 7652 — Grain trailer, Wilson Trailer Co.
No. 7653—Vitamin A product, Nopco Chemical Co.
No. 7654—Elevator, feed mill designs, T. E. Ibberson Co.

(Turn to page 70)

Purdue University:

In the only 2 diets where soft phosphate was fed to swine at a reasonable level, 26 lbs. per ton of feed supplying .12% P, there were no differences in weight, feed per lb. of gain, daily gain or feed consumption between soft phosphate and dicalcium phosphate.

(In all other diets soft phosphate was fed at greatly excessive levels with poor results).

SOFT PHOSPHATE, INC.
media, pennsylvania

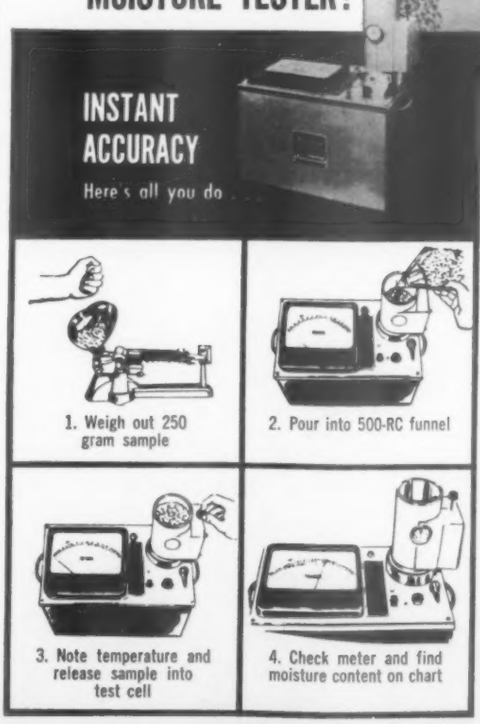
A Natural, Research-Proven, Sensibly Priced Phosphate That Has Fortified More Than 100,000,000 Tons of Feed

ACCURACY

ALL IN A DAY'S WORK WITH A

STEINLITE MOISTURE TESTER!

INSTANT ACCURACY
Here's all you do


1. Weigh out 250 gram sample
2. Pour into 500-RC funnel
3. Note temperature and release sample into test cell
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New Model 500-RC makes 300 to 400 tests each working day!

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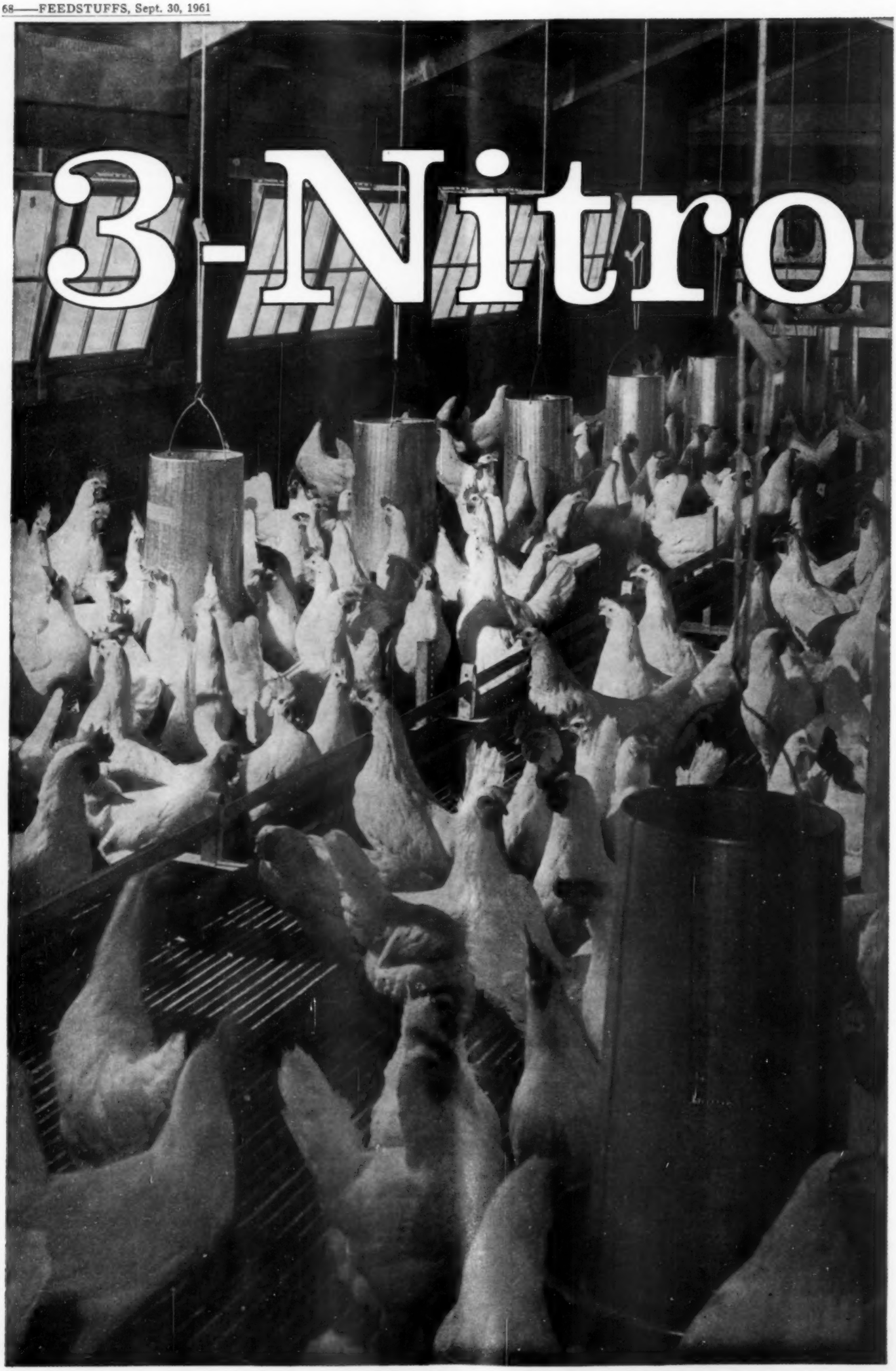
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2. *Improved feed efficiency*

3. *Better livability*

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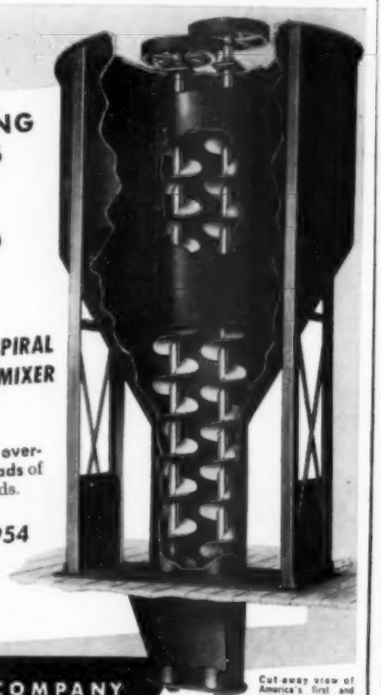

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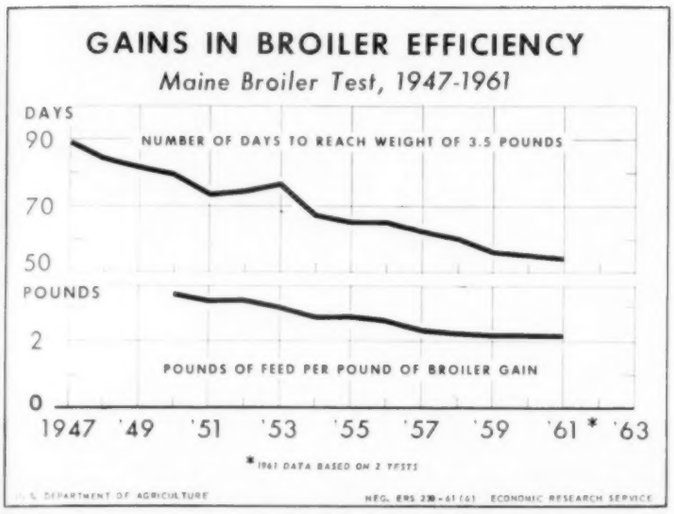
GAINS IN BROILER EFFICIENCY
Maine Broiler Test, 1947-1961
DAYS
90
70
50
NUMBER OF DAYS TO REACH WEIGHT OF 3.5 POUNDS
POUNDS
2
0
POUNDS OF FEED PER POUND OF BROILER GAIN
1947 '49 '51 '53 '55 '57 '59 '61 * '63
* 1961 DATA BASED ON 2 TESTS
U.S. DEPARTMENT OF AGRICULTURE
NEG. ERS 230-61 (6) ECONOMIC RESEARCH SERVICE

This chart prepared by the U.S. Department of Agriculture shows (a) the decline from 1947 to 1961 in the number of days required to grow a broiler to 3.5 lb. and (b) the decline from 1950 to 1961 in the amount of feed needed to produce a pound of gain.

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No. 7697—Pfizer activity review booklet, Chas. Pfizer & Co., Inc.

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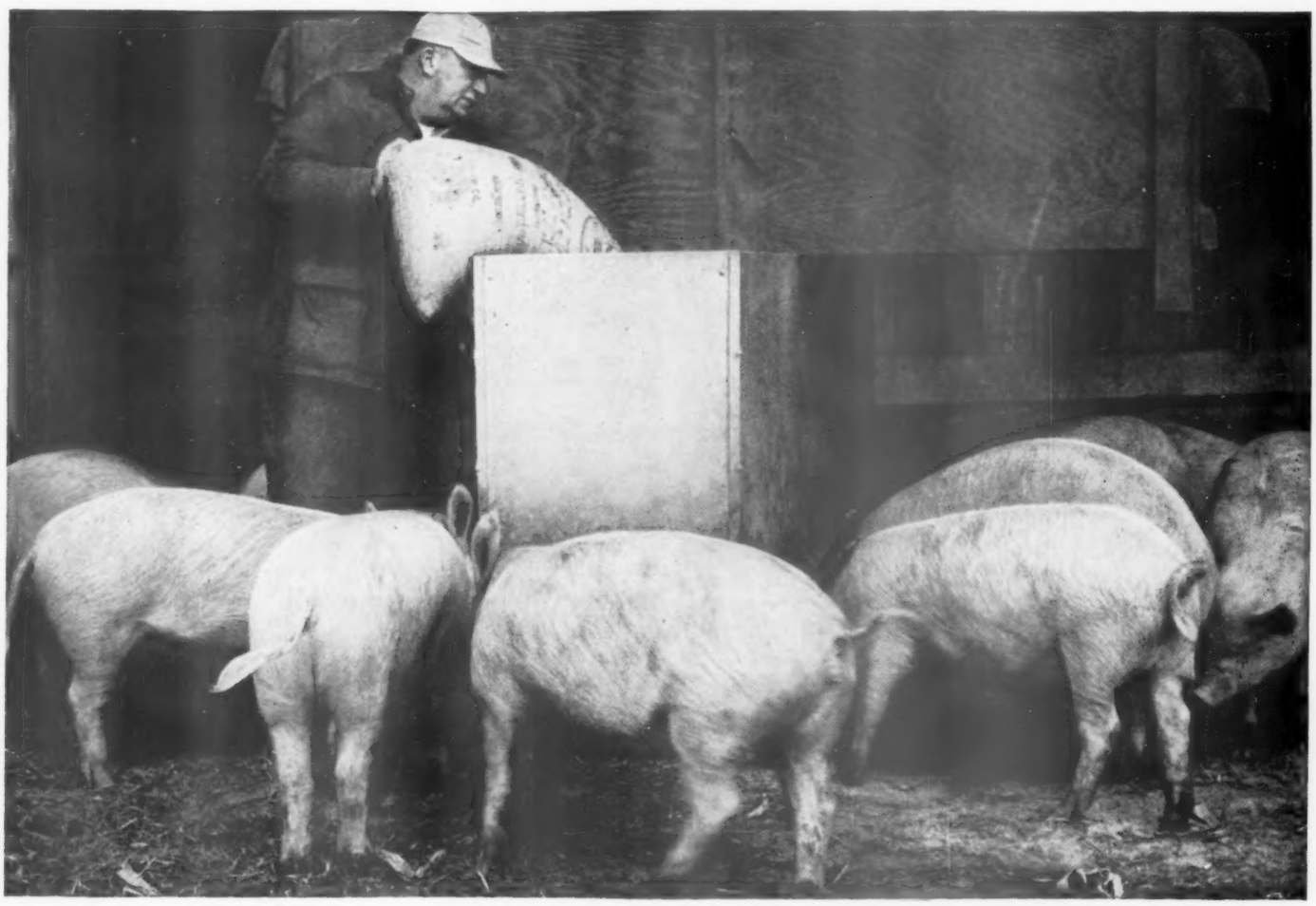

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But, in all but one, the ratio between cost and effectiveness is out of line. The single exception is PRO-STREP.

PRO-STREP, an effective combination of penicillin and streptomycin, will help prevent scours at a lower cost than any other single antibiotic—narrow- *or* broad-spectrum! And, that's not all. PRO-STREP also helps stimulate appetites, promote growth and improve feed efficiency.

University tests have repeatedly demonstrated the value of a combination of penicillin and streptomycin in fortifying swine rations. The majority of published reports on this combination have been based on PRO-STREP.

That's why more and more progressive feed mills throughout the country are switching to PRO-STREP. What they want is what you want . . . an effective combination of antibiotics that can promote growth and help prevent "necro" at a lower unit cost. Merck Chemical Division, Merck & Co., Inc., Rahway, New Jersey.

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BABY BEEF AWARD WINNER—Wanda Joyce Lowrey, Dawn, Mo., 4-H member, received the grand champion baby beef award at the Stamper Youth Auction in Moberly, Mo. Photo shows Miss Lowrey and her prize-winning steer as she received the award from Howard A. Stamper, president of F. M. Stamper Co., sponsor of the event.

2,000 Attend Youth Auction Sponsored by F. M. Stamper Co.

MOBERLY, MO.—Some 2,000 4-H club members, Future Farmers of America members, parents, club leaders and others gathered here for the seventh annual Stamper Youth Auction sponsored by the F. M. Stamper Co. of Moberly.

The auction this year offered 25 steer calves, 30 registered gilts and 1,000 pullets (sold in lots of 100) to the highest bidder in stamps obtained with each sack of feed. Each stamp has a bidding value of 10 points—youngsters obtain them from their families, neighbors and friends. The stamps are then used in place of money to bid and buy livestock at the auction.

Two kinds of stamps are issued—blue stamps with turkey and broiler feeds and red stamps with all other feeds. Certain animals are designated for purchase by holders of blue stamps and others by holders of red stamps.

Top selling animal at the event was an Angus calf that sold for 490,000 points. The top gilt went for 270,000 points; the average price paid for a gilt was 112,000 points. The 10 lots of chickens averaged 22,800 points.

A highlight of the day's program was the livestock and poultry show, with boys and girls who purchased or won animals and chicks the previous year competing for ribbons, prize money and trophies.

The event saw two Missouri youths, Norbert Gebhardt of Forest Green and John Koenigsfeld of Bonnots Mill, singled out to receive Stamper Youth Auction Alumni Achievement Award Plaques from Howard A. Stamper, president of F. M. Stamper Co. Both boys are alumni of the Stamper Youth Auction. They have been recommended by the National Board of the Future Farmers of America for the 1961 American Farmer Degree.

Test Energy-Protein Levels for Layers

FARGO, N.D.—A study of energy-protein relationships in laying diets for chickens conducted at North Dakota State University here has shown a corn-soybean oil meal laying diet containing 14% protein with a 94:1 calorie:protein ratio is sufficient to promote optimum efficiency of egg production (65 to 70%) and to maintain normal egg size.

Three trials consisting of 44 lots of 30 birds each were used to study effects of dietary energy levels, protein level and dl-methionine supplementation for laying hens, said a study report published in the bimonthly bulletin North Dakota Farm Research.

The researchers—George Olson, research assistant; W. C. Lockhart, assistant poultry husbandman; Dr. R. L. Bryant, poultry husbandman, and D. W. Bolin, associate animal nutritionist—say they found that the feed required to produce a dozen eggs increased 6.2% for every 100 metabolizable calorie decrease per pound in the diet.

They say that the addition of 0.1% supplemental dl-methionine did not yield beneficial results.

Statistics from this study also show that egg quality declines at an increasing rate as the length of time in production increases.

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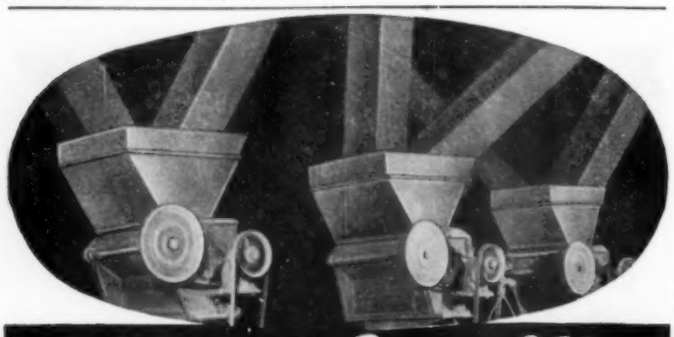

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Use of Amino Acid 'Silhouettes' Explained

VIRGINIA BEACH, VA. — It appears that one of the simplest ways to compare amino acid patterns is by use of "silhouettes."

This was pointed out by Dr. Laurent Michaud of Merck Sharp & Dohme Research Laboratories, Rahway, N.J., in a talk at the North Carolina Feed Manufacturers Assn. convention, held at Virginia Beach, Va.

Dr. Michaud described and illustrated the use of the amino acid silhouettes in poultry nutrition. In this connection he noted that there recently has been a great deal of attention paid to the relationship of amino acids to each other and to energy.

In discussing amino acid patterns and the use of silhouettes, he cited Texas work confirming the fact that sesame oil meal, enriched with lysine, produces better feed conversion than soybean oil meal. It may be that sesame oil meal provides a more readily digestible source of energy, but its amino acid pattern is different enough to account for the superiority of sesame oil meal over soy.

The silhouettes in Figure 1 illustrate the differences between two rations containing either sesame oil meal or soybean oil meal. In this instance, the sesame ration plus lysine is taken as the positive control or standard and is deliberately set as a straight line. Such a straight line is obtained by joining the values for amino acids present in the highest and lowest concentrations and by locating the others according to their concentration. The ordinate represents the amino acids %/therm/lb. and the abscissa is numbered from 1 to 20. Thus each amino acid is set at a fixed point on the abscissa. Subsequently the amino acids of any ration (in this case, the soybean meal ration) to be compared with the standard or positive control are set at their fixed point on the abscissa and at their respective concentrations.

Dr. Michaud said that this approach is "little more than a mechanical novelty" but that it "greatly facilitates the comparison of two different amino acid patterns." He contrasted use of silhouettes with use of analysis tables showing amino acid percentages in the rations. With the tables, it is impossible to visualize how the amino acids are related to each other or how the relations of the amino acids in one ration differ from those in another ration. Furthermore, no consideration is given to the amino acid-energy ratio.

Dr. Michaud went on to show how inspection of the silhouettes can be helpful in comparing amino acid patterns and in considering how possible changes in a ration would affect the pattern.

Also, construction of silhouettes may produce leads related to amino acid balances. For example, Figure 2 shows what happens when the need for a single amino acid, such as lysine, is fulfilled by adding a whole protein. In this example, the straight line again represents a sesame oil meal ration with added lysine. The broken line is from a similar ration but where the lysine was added as meat and fish. The lysine level was brought up to the desired concentration, but in the process, arginine, glycine, tyrosine and cystine-methionine were lowered. Because of this change in amino acid pattern, or for some other reason, efficiency of production was inferior to that obtained with the "standard" ration.

Other uses of silhouettes also were explained by Dr. Michaud.

FIGURE 1

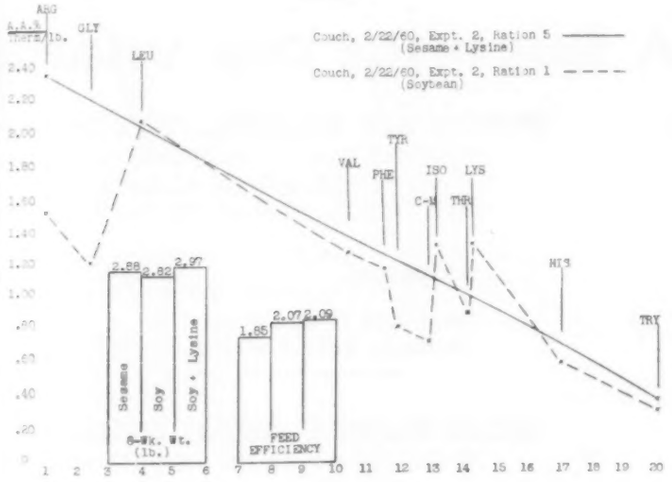
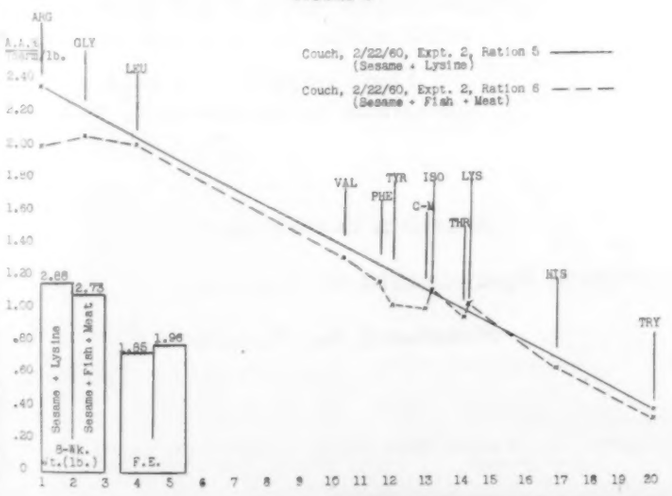


FIGURE 2



Open-Front Pig Barns Suggested for Canada

FREDERICTON, NEW BRUNSWICK—In milder regions of Canada it may be economical to feed market pigs in an open-front pole barn, says R. J. Curtis of the Canada Department of Agriculture's research station here. He found it produced 50% more Grade A pigs than a closed-in building did.

He described tests over a 14-month period with four groups of pigs in a piggery of usual construction and an open-front barn, the latter 39 sq. ft. with an aluminum roof. Half the test pigs were transferred to the pole barn when they weighed 40 to 60 lb., and all remained on test until marketed at 190 to 210 lb.

Those in the pole barn did better in summer but not as well in the winter as the piggery lots, however the saving in housing and labor costs favored the pole barn operation.

Compared with the test groups in piggery, those in the pole barn had an average gain for summer and winter-fed of .07 lb. less, and they required 30 lb. more feed per 100 lb. gain and three days longer to reach market weight. On the other hand 78% of the pole barn test groups graded A compared with 56% from the piggery. The balance of the cost factors was in favor of the pole-barn groups, Mr. Curtis reported.

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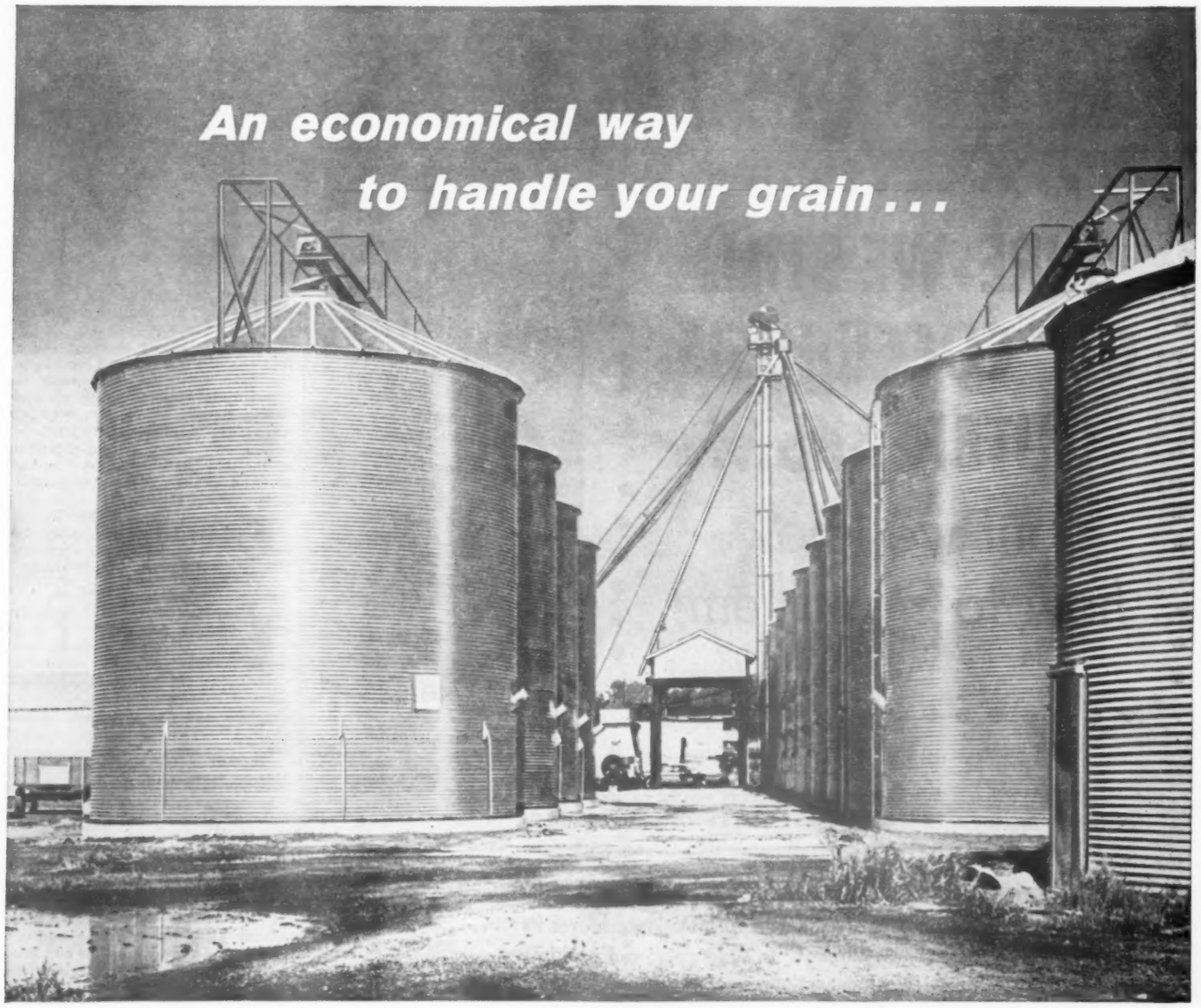

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These sturdy Butler units are made with tight-fitting steel panels that are bolted together to assure fast, economical construction. They keep grain clean, dry and fire-safe. And they are easy to aerate and fumigate.

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Midwestern Egg Program Described

MINNEAPOLIS—"Egg quality is the key to the future growth of the egg industry," declared a representative of a large midwestern cooperative marketing and feed manufacturing organization at the recent American Institute of Cooperation conference here as he described a quality egg program started 2½ years ago in southwestern Minnesota.

"As a marketing organization, and this holds true of other organizations, we are only limited by the consistent supply of good quality eggs to expand our markets and outlets to the benefit of all," said E. E. Palmer, manager of the poultry and egg division of Land O'Lakes Creameries, Inc., Minneapolis. "We must give the buyer a quality product or lose his business to someone else.

"The market exists for good quality. We know the demand is there. The customer is willing to pay for good merchandise. The grocery industry is ready to merchandise quality eggs to this customer. And the distributor has the marketing know-how.

"But we cannot sell something that does not exist. We need more quality eggs."

Mr. Palmer related that in the 30 years that Land O'Lakes has been marketing eggs it has never had a volume of uniform quality eggs large enough to satisfy the needs of its customers.

Prices to Producers

In his comments about prices paid egg producers, Mr. Palmer noted that producers in Minnesota and in some surrounding states are paid on the basis of a New York or Chicago market quotation, "which represents limited trading in fine eggs. We believe that if we produce a large enough volume of the type of fine eggs we are capable of producing and market them directly to retailers, then the prices to producers will compare more favorably with prices received by producers in so-called nearby areas.

"We know that prices paid producers in Minnesota in 1960 averaged 27.4¢ doz. The U.S. average in 1960 was 36¢ doz. One of the reasons for this large spread may be that in highly developed commercial areas such as the West Coast and some places in the East and South, grading is done on the farm. Also, hatching eggs bring a higher price in commercial broiler areas, but one of the big reasons is the abundance of poor quality eggs produced and shipped out of the state."

Mr. Palmer noted that Minnesota produced 296 million doz. eggs in 1960 and 70% were exported out of the state. "We know that to compete favorably," he said, "we must produce a quality egg that is as good or better than the eggs produced in the areas where our eggs are consumed."

Program's Objectives

Mr. Palmer listed the following objectives of the quality egg program started in southwestern Minnesota by Land O'Lakes 2½ years ago:

To provide eggs of a quality suitable to compete in the markets with the eggs from any other production area of the U.S.

To provide uniform volume of eggs weekly in supplying the needs of Land O'Lakes customers.

To provide a volume of production at the processing plant which will minimize plant operating costs.

To assist the farmer in producing the highest quality eggs at the lowest possible cost.

To make a return to the producer that is in line with this superior quality and standardized volume.

Requirements

In this program the producer agrees to:

—Sell to Land O'Lakes at least 95% of all poultry and eggs produced by him.

—Follow the Land O'Lakes feed program and flock management and egg handling program outlined by Land O'Lakes under the direction of a fieldman maintained by Land O'Lakes at its own expense.

Land O'Lakes agrees to:

—Furnish the producer with a production program, including recommendation with reference to strains of layers, dates of replacement of flocks, dates for sale of poultry and methods for handling eggs and poultry.

—Assist the producer in the purchase of egg and poultry production equipment and supplies.

—Maintain at its own expense a fieldman who will perform services to the producer as specified above, to improve the business conditions and review compliance by the producer with the terms of this agreement.

—Receive, grade, brand and sell all the product delivered to it by the producer at the best price obtainable under market conditions.

—Make regular payments to the producer either semi-monthly, or weekly, or oftener, for all eggs and poultry received from the producer.

Flock Management

Flock management regulations are as follows:

1. Provide adequate housing that is clean, dry and well ventilated. Keep layers confined to house at all times.

2. Use only Land O'Lakes recommended strains of layers. Land O'Lakes recommends use of several strains rather than only one. Insist on white eggs only.

3. Follow Land O'Lakes replacement schedule when putting in new layers: (a) Minimum of 14 months' production—some producers are replacing at less; (b) minimum of two separate age groups of birds, 7 months of age differential between the two groups—some producers replacing 3 or 4 times a year, and (c) two year maximum time for new producers to conform to schedule.

4. Provide adequate nest space that is kept clean and dry.

5. Follow one of the recommended Land O'Lakes feeding programs.

6. Gather eggs at a minimum of three times daily. When outside tem-

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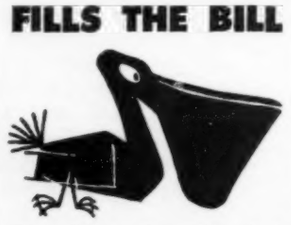

For Timely, Useful Industry Information

FEEDSTUFFS

perature is over 85°, gather four or five times daily.

7. Place baskets of eggs in cooler immediately. Cooler room must be mechanically refrigerated with maximum temperature 55° and minimum humidity of 80%.

8. When eggs are cooled, pack promptly in pre-cooled cases with small ends down. Do not leave eggs in baskets more than 24 hours.

9. Dry clean dirty eggs. Do not wash. Large producers use automatic dry cleaning equipment and small producers use buffer wheels.

10. Call Land O'Lakes fieldman promptly if and when a production problem arises.

Land O'Lakes helps producers plan their program and increase their flock size and production.

Paying Price Raised

"In 1960 we raised the paying price to these quality producers more than 4¢ doz. compared with prices for other eggs," Mr. Palmer said. "Our plant costs have been lowered simply because it is much easier to run a uniform quality egg through the plant than when each lot is different. Also, the lot size per producer is larger.

"We have the approval of the U.S. Department of Agriculture to install the Haugh unit system of grading for AA if and when we want it. We started this program in one plant and have now spread to a second plant and are now covering the southern half of Minnesota and extending into northern Iowa and eastern South Dakota. Interest in this program is spreading quite rapidly, and we receive calls every day to speak to producer groups.

"But we do not want to spread ourselves too thin and go out too far from a plant to pick up eggs, because by doing this, it becomes too hard to supervise, and we defeat the purpose of the program.

"Our supervision is very important. Supervisors will automatically call on a producer once a month or oftener by request, or should the producer's grade fall under 90% A's, then a supervisor will call on him immediately. In addition to these duties, the supervisors are responsible for contacting new producers to help them with building and equipment plans and also selection of replacement pullets and all disease and sanitation control."

Most Use Concentrates

Mr. Palmer noted that Land O'Lakes insists that the producer operating under the program use Land O'Lakes feeds. "The majority of the producers are using Land O'Lakes concentrates and their home grown grains in a ratio of 1 part concentrate to 3 parts grain," he said.

"The important point is the uniformity of the egg produced by following a strict uniform feeding program. Looking under a light, these eggs all have the same yolk color, interior quality and shell texture—and we believe this is important in building consumer acceptance."

Mr. Palmer said Land O'Lakes management believes the most important part of the cooperative's egg program is its replacement schedule. "This means we will have the same number of large, medium and small eggs each week, 52 weeks a year, thus guaranteeing our customers the same quality and size of egg each and every week," he noted. "We don't have to be concerned with surpluses and shortages."

Egg Size Percentages

Here are some figures resulting from Land O'Lakes' experiences over the past 2½ years:

"In September, 1959, after being on this program only six months, our receipts of eggs were: Large, 50.9%; medium, 35.9%, and small, 13.2%.

"In September, 1960, after 1½ years on the program, our receipts were: Large, 61.7%; medium, 29.9%, and small 8.4%.

"In September, 1961, we can estimate our receipts very easily to be: Large, 70%; medium, 23.1%, and small, 6.9%.

"When we reach capacity of a plant, which should be in 1962, the receipts are expected to be: Large, 81.2%; medium, 14.8%, and small, 4%.

"It is easy to see the importance of having a uniform supply of eggs the year around," Mr. Palmer commented.

What the Consumer Wants

In a discussion of what the consumer wants in eggs, Mr. Palmer related that a test conducted by Land O'Lakes revealed that these quality factors were desired: Clean shells and uniform size in the package; strong shells and well-shaped eggs, uniform yolk color; uniform high quality—firm whites and well-centered, upstanding yolks; pleasing flavor, fair price and a sturdy carton.

"Mrs. Consumer will build her shopping habits to get the type of egg she wants," Mr. Palmer asserted. He said that Land O'Lakes learned in a survey that more housewives would pay premium prices for quality eggs than would pay premiums for pot roast, butter, flour, coffee, cheese, ice cream or cake mix.

Mr. Palmer said eggs are an item with which a store operator can build confidence in the minds of his customers. "Egg quality is the reputation of that store; it can earn him or lose him a customer faster than almost any item he carries, so there can be no question as to how the store operator regards egg quality.

"Many stores have set up their own quality control programs, such as break-out tests on every shipment they receive. They are not satisfied with only a candling report. Many stores require USDA grading—code dates on the carton so they can check freshness. Eggs are taken off the shelves if they get too old. They insist that eggs be refrigerated constantly. Some stores have successfully developed an AA program. Some stores, in educating the consumer on quality, have demonstrators who break eggs before the customers showing them the difference between poor eggs and top quality eggs."

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University of Missouri Researchers Report On Swine Nutrition and Other Studies

COLUMBIA, MO.—Reports on feeding and other research were presented by University of Missouri scientists at the university's annual Swine Day.

Visitors also saw research projects under way at the Missouri swine research facilities, and they heard discussions of buildings and equipment.

The annual Swine Day is sponsored by the university's animal husbandry department.

The researchers reported:

- Sows fed a high level of antibiotic at breeding time will farrow and wean more pigs.
- Rolled corn and ground corn gave similar results for fattening hogs.
- No differences in feed efficiency or backfat thickness were found among hogs fed a 16% protein growing-fattening ration and hogs fed a 12% protein ration.
- Pigs preferred feeds containing sugar over those without sugar. Also, they liked feed containing an additive that gives feed the flavor of sow milk, and another additive that gives feed a strong odor.
- Work has been done on hormone injections to increase number of eggs ovulated and to control breeding dates.

ANTIBIOTICS FOR SOWS—Sows fed a high level of antibiotic at breeding time will farrow and wean more pigs, University of Missouri tests show.

Sows receiving antibiotic farrowed 10.4 pigs per litter, compared to 9.4 pigs for those not treated. Number of pigs weaned per litter was 8.6 and 7.8, in favor of the antibiotic treatment.

Dr. Leland Tribble, university swine specialist, said the latest test confirms the results of four earlier tests.

Sows were fed about ½ gm. of antibiotic per head per day for 10 to 21 days at breeding time. Aureomycin and Terramycin have given equal results when used for this treatment.

CORN PREPARATION—Rolled corn and ground corn give similar results for fattening hogs, a University of Missouri researcher has found.

Dr. Tribble, associate professor of animal husbandry, described a test of different methods of preparing corn for growing-finishing hogs.

Either rolled corn or that ground with a hammermill produced faster gains than shelled corn when fed free choice with protein supplement. Actual average daily gains were: rolled corn, 1.48 lb.; ground corn, 1.45, and shelled corn, 1.32.

The various treatments showed no difference in feed required per pound of gain. However, hogs fed corn and supplement free choice ate less supplement than hogs fed a ground complete mixed ration.

PROTEIN LEVELS—No difference in feed efficiency or backfat thickness was found among hogs fed a 16% protein growing-fattening ration and those on a 12% protein in a Missouri test.

Test results were reported by Dr. Tribble. One lot was fed 16% protein rations from weaning through fattening. Another lot received 12% protein throughout the entire period.

Two other lots were changed from 16% to 12% protein, one at 85 lb., the other at 135 lb.

Hogs on a 16% ration throughout the period averaged 1.61 lb. daily gain. This was slightly better than lots switched from 16 to 12% protein. Hogs on straight 12% protein gained an average of 1.48 lb. daily.

Dr. Tribble said the findings confirm the long-standing recommendation that hogs be switched from a 16 to a 12% protein ration at 100 to 125 lb.

FLAVORS—Baby pigs seem to have a sweet tooth, just like children, researchers noted.

In a series of tests, pigs preferred feeds containing sugar over those without sugar. In addition, they liked feed containing an additive that gives the feed the flavor of sow milk, and another additive that gives feed a strong odor.

Dr. Tribble described results of the tests at Swine Day. He said the tests did not answer the questions of whether these additives will increase total feed consumption.

"Further research will be needed before we can say whether these additives are practical," Dr. Tribble added.

Being confined on concrete or out on pasture did not seem to make a difference in the pigs' tastes.

Five percent of sugar was added to the test rations, replacing that much corn. The commercial product that gives feed the strong odor was used at 2 lb. per ton. A commercial sow milk flavor was added at 1 to 2 lb. per ton of feed.

BREEDING RESEARCH—A wide variety of research projects aimed at helping the hog breeder improve the performance of his breeding herd are underway at Missouri.

The research was described by Bill Day, swine breeding specialist.

One project is aimed at finding ways to increase the number of eggs produced by the sow's ovaries at breeding time. The number of eggs produced sets an upper limit on litter sizes at farrowing.

One method of increasing the ovulation rate in gilts is to delay breeding until their third heat period. Gilts ovulate one to two eggs more when older than during their first heat period.

Increasing feed intake, or flushing, two to three weeks before breeding is another practice that will improve litter size by increasing the ovulation rate.

Prof. Day has experimented with hormone injections to increase number of eggs ovulated. The injected gilts showed an average of 1.33 more eggs ovulated per gilt, but this advantage seemed to disappear by the 25th day of pregnancy.

Prof. Day also described his work on controlling breeding dates in swine. Hormone injections have been used in attempts to conttrol time of heat and ovulation in gilts. The treatments were designed to interrupt the normal estrous cycle in the gilts and to start a new cycle for all gilts. Thus all gilts could be bred at about the same time.

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have resulted in control of the breeding dates in about 50 to 60% of the animals injected.

Still another project is attacking the problems that need to be solved before it's likely that artificial insemination can be used widely in swine herds. One of the main problems is the lack of a diluter that can be used to successfully store boar sperm for at least three to four days. Diluters commonly used to store bull sperm do not maintain the fertility of boar sperm during storage. Nor can boar sperm be successfully frozen at the present time.

Another problem is that the number of sows that can be bred from a semen collection is rather limited using present techniques. Whereas 400 cows may be bred from a single collection from a bull, present methods limit the number to about 10 or 12 for each boar semen collection.

Prof. Day said that research is continuing on all these projects.

BUILDINGS — New construction methods and materials for putting up swine buildings were described. D. G. Jedele, University of Illinois extension agricultural engineer, said one new type of construction makes use of insulated tilt-up concrete panels. This construction is similar to the tilt-up method used for trench silos but also includes plastic foam insulation in the pre-cast panel.

The panel is made by casting 2 in. of concrete, then laying in 1½ in. of the plastic insulation. This is capped with another 2 in. of concrete. The whole thing is tied together with reinforcing wire.

Plastic foam will not rot or soak up moisture, and is an efficient insulating material, Mr. Jedele said. The concrete surface inside and out gives a serviceable building that can be scrubbed and sanitized easily.

When discussing the new materials and construction methods, the Illinois engineer stressed that he was not recommending them over some of the other ways of putting up swine buildings. Instead, he said he was reporting on some of the new things being tried.

Another new type of "sandwich" panel is one that has flat sheets of aluminum bonded to both sides of a plastic foam insulation material. The panel, when applied to a building frame, gives a finished, insulated inside and outside wall in one operation. Mr. Jedele said aluminum panels of this type are not yet available on the market.

Still another "sandwich" panel described by Mr. Jedele consists of plywood bonded to plastic foam insulation. One firm is marketing this type of panel for farm buildings.

The plastic foam used in these panels is technically a polystyrene foam. Mr. Jedele mentioned a newer plastic foam, called urethane foam, that has nearly double the insulating value of polystyrene and of the ordinary rockwool and fiberglass insulations ordinarily used now. The new foam is still quite expensive and will be until volume production can reduce costs.

The Illinois specialist also described the use of lumber rigid frames. These frames eliminate the need for horizontal cross-ties and other bracing so that all of the interior space is completely open. This type of frame has been used effectively in farrowing houses, nurseries and enclosed finishing buildings.

A farrow-to-finish swine building is as economical and has several advantages over using several buildings in hog production systems, the engineer said. He noticed that, frequently, farm hog systems tend to grow up in stages. Suddenly, the farmer reaches a point when he realizes that the buildings in his system are mismatched in capacity.

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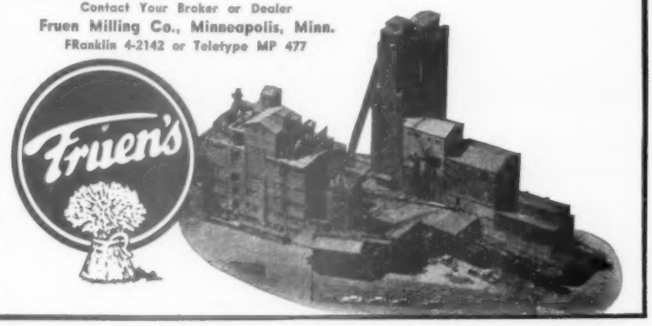

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JOE BROOKS

BY AL P. NELSON

Every Mill Should Have a Slogan

The time was 5:30 p.m. that hot September day, and the whine of the hammermill had faded to nothingness. The only sound in Joe Brooks mill came from the shower room where one employee after another stood waiting to shower. None wore bikinis, but each had a big bath towel.

"Hey, Smiley, hurry up," shouted Milt. "You're not that dirty. We've got just 45 minutes to get to the Hotel Manitou for the steak dinner."

"The early bird catches the worm," Smiley chuckled. He came out of the shower rubbing the beads of water from his body with a big yellow towel. "Okay, pot belly," he said to Milt. "It's all yours."

"I don't have a pot belly!" Milt burst out, "not when I hold my breath and pull up my shoulders."

"What worries me," Butterball Barlow said anxiously, "is that slogan Joe wants us to think up for tonight's meeting. Why do you think he wants a slogan—all of a sudden? I can't come up with a good one."

"I have one," Ed Harrigan, the freckle faced truck driver, said. "But I won't tell you. I want that $10 cash prize. I can use it."

Every Firm Needs a Slogan

"The reason Joe wants that slogan is that he figures it's just one more way to attract attention of customers and prospects," Smiley said. "Every firm needs a slogan—just to make its individuality stick out, that's why."

"Yes, look at that salt company's slogan," pointed out Windy Kramer, the route man. "'When it rains, it pours.'"

"In my day," said Pop Henley who had just come into the employee room and overheard the conversation. "'Ask the man who owns one' really stuck with people."

"A friend of mine who sells in the South," said Mike Reitci, "tells of a seed store that advertised 'A progressive firm run in a seedy manner.'"

That brought a chuckle. "Yes," said Milt, "how about Mae West's slogan —'Come up and see me sometime'?"

"Throw him back into the shower!" Pop chortled. "He's talkin' about women again."

"It's not easy to think up a good slogan," Butterball Barlow complained. "I haven't slept well the last week just worrying about it."

"Well, none of us are going to tell you ours," Windy said unsympathetically. "We want that $10 prize. But I do have a spare slogan I'll sell you for $1."

"You have?" asked Butterball eagerly. "What is it?"

Windy cleared his throat. "Well, it goes like this: 'Buy the feed that makes Joe rich.'"

Butterball's face fell and the rest of the employees roared.

At the steak dinner in the Hotel Manitou, the employees had a good time. Not only was the steak delicious and the apple pie ala mode superb, but the employees kept thinking of various slogans which American business firms use.

Stimulated Thinking

"Gosh," Joe said, "your minds are automated tonight on the slogan subject. Good, discussion stimulates thinking. I hope you men come up with a slogan that will be what I want."

"Leave it to us, Joe," Milt Peters said confidently. "We never fail you."

"No, if we're not working, we're sleeping on feed sacks," chuckled Smiley. "We never leave the mill."

"I resent that remark," Milt said sternly. "I feel it is directed at me."

Back at the mill, with the fan on, and with the men smoking Joe's cigars, the medium price kind, the meeting got under way. "Well, Butterball, what slogan have you got to offer?"

The tall, pimply faced young man flushed. "Well—er, Joe, I had an awful time thinking up a slogan, and—"

"You mean you haven't got one?" Joe asked.

"Well, er, it's no good, Joe, but the only one I could come up with is 'Buy Joe's feeds. They are Good for Your Livestock and Poultry, and They Make Joe Rich.'"

Laughter roared through the salesroom and Joe rapped for order. "Thanks for the effort, Butterball. You're in there pitching, I can see. I wish my feeds did make me rich. But they don't. I just make a good living. So that slogan is out. Milt, what is your slogan?"

Milt cleared his throat. "Well, we're after the big feeders, so I suggest 'A Modern Mill for Modern Farmers.'"

"That leaves out the small farmers," said one employee. "They won't like that."

"What have you got, Smiley?" Joe asked.

"I've settled for 'Our Feeds and Service Can't Be Beat,'" said Smiley. "That challenges our competitors."

At this time, Joe pointed his finger at Ed Harrigan.

Ed smiled. "I chose 'If Poultry and Livestock Could Talk, They'd Ask for Our Quality Feeds.'"

"Not bad, Ed," said Milt, "but it's too long.

Joe now turned to portly Ken Richert. 'Ken, what did you come up with?"

The portly employee flushed. "Well, I settled for 'The Grind and Mix Center of Douglas County.'"

"I like that," Joe said. "And, Pop, what have you got?"

Pop had been sitting listening to the slogans, a frown on his face. "Well, I don't know, I don't like any of these slogans. They're all the braggin' kind, and that's the way the customer is going to look at them. He's going to say, 'why don't they think of me first?'"

"So?" Joe asked. "What slogan would consider the farmer more than those suggested?"

"As you know," Pop said slowly. "I used to sell mayonnaise in the Midwest for a big company. I picked up a lot of customer savvy. I found you had to put yourself in the customer's shoes. He thinks he's important, and he is. He always likes to be asked to buy, not to be told to buy because this or that firm is bigger and better than the other. And on the basis of that psychology, I worked out my slogan."

"Well," said Joe a little impatiently, "what is it?"

Pop sat up a little straighter. "As my slogan, I chose 'The Mill That Wants Your Business.'"

For a moment, the employees sat silent. Then they began to applaud. They kept applauding, and there was little doubt but what Pop Henley would win the $10 slogan award.

Walnut Grove Project

OSKALOOSA, IOWA — Walnut Grove Feed Co. of Atlantic, Iowa, has started construction of a 50 by 100 ft. warehouse here for the distribution of its products in this territory. The building is being constructed of aluminum sides and walls, with concrete dock-height floors. The company will occupy the building about Oct. 1.

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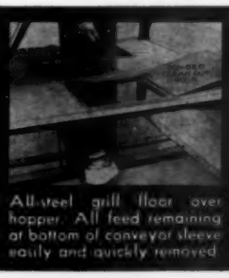
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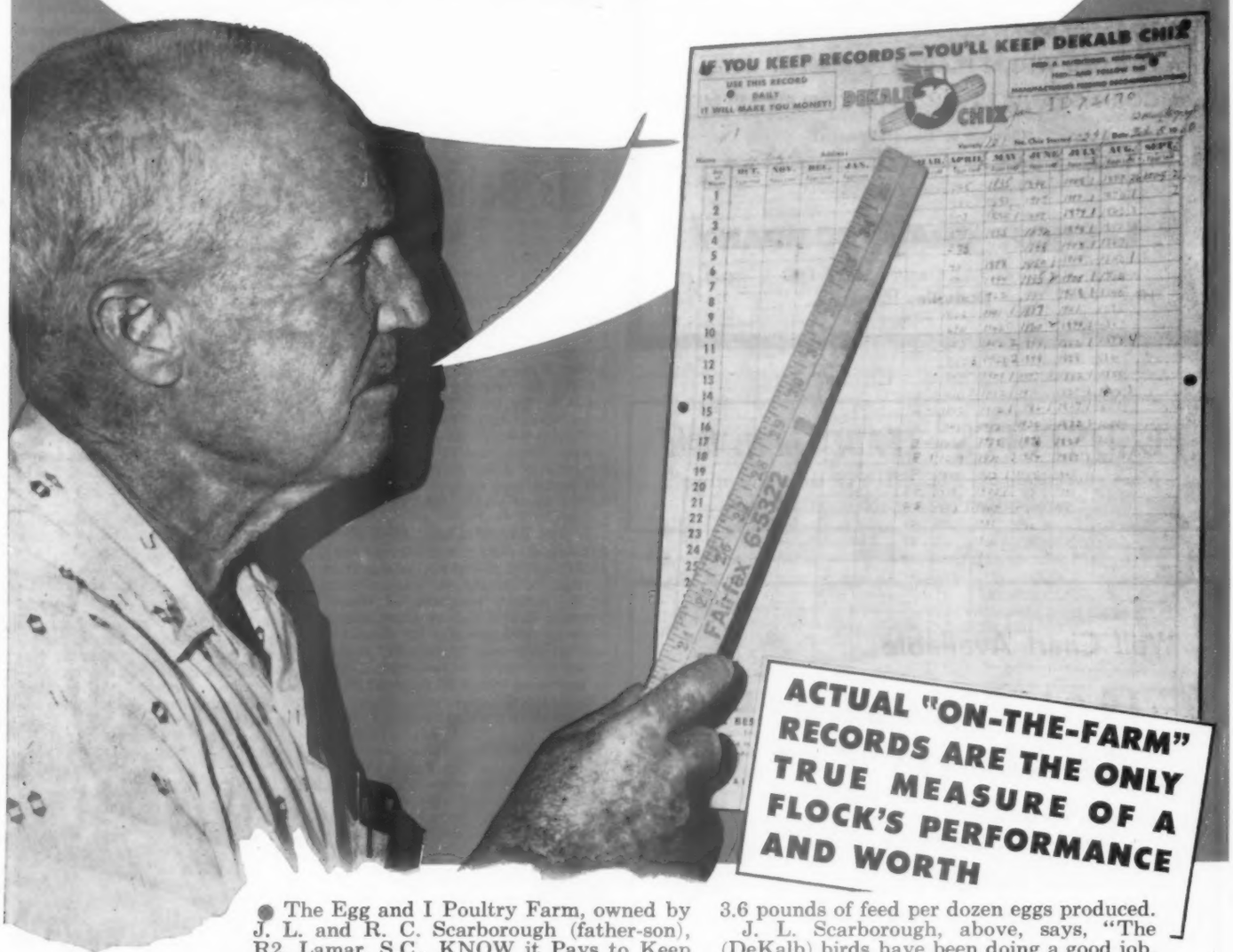

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● The Egg and I Poultry Farm, owned by J. L. and R. C. Scarborough (father-son), R2, Lamar, S.C., KNOW it Pays to Keep TWO Things—Accurate records and DeKalb Layers. One of their houses of 22,259 DeKalb 131's peaked at 86% production in June of last year, (their 3rd month of lay)—held to 73% in the hot month of August, (their 5th month of lay).

Another house of almost 2600 DeKalb birds, averaged 1650 eggs in August, (their 5th month of lay). They were eating only 3.6 pounds of feed per dozen eggs produced.

J. L. Scarborough, above, says, "The (DeKalb) birds have been doing a good job. Our buyer is well satisfied with our egg quality. We also like the egg size." The Scarboroughs buy started DeKalb pullets from Pee Dee Hatchery, Hartsville, S.C., with which they have done business for 30 years. They bought their first DeKalbs from "Pee Dee," saying, "We had faith in them—figured they had the right kind." The "right kind" is DeKalb.

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EGG PROCESSING—Here's an interior view of the egg room at Wetzel Produce Corp., Sauk City, Wis. Women process the eggs for size and quality before cartoning.

Demand for High Quality Eggs Is Behind Wisconsin Program

By Al P. Nelson
Feedstuffs Special Writer

The demand for quality eggs is so high in the midwestern area that a 6,000-case-per-week firm, Wetzel Produce Corp., Sauk City, Wis., has joined Nutrena Mills, Inc., Minneapolis, in a far reaching quality egg program in the area. The target is to build within three years 50 Nutrena hi-density poultry houses (10,000 layers per house) and 17 brooder houses at a cost of about $2 million. A poultry house and equipment for 10,000 layers costs about $32,500 in this project.

A pilot project house, 240 by 40 ft. galvanized metal building, housing 10,000 layers, is already in operation at Sauk City. By the end of 1961, A. J. Wetzel, president of Wetzel Produce Corp., and M. E. Rudolph, Nutrena sales manager for Wisconsin and southeastern Minnesota, expect to have 10 layer houses erected and in operation within 50 miles of Sauk City.

"Our large plant is running at 50% capacity, even though our 6,000 cases per week output ranks us among the Midwest leaders," says Mr. Wetzel, "but we need more quality eggs for our customers, and we feel that this Nutrena quality egg program can help us. Our firm has always had a quality egg program, buying eggs from small and large producers throughout southern and central Wisconsin. We were also the first to push the U.S. Department of Agriculture Fresh Fancy quality program in Wisconsin. This new project should provide us with the additional quality eggs that we need in our operation."

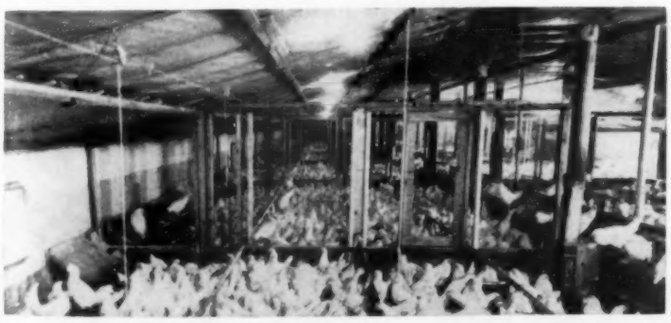
Wetzel Program Explained

Under the Wetzel program, the egg producer buys or builds his own layer house and equipment. If he needs financing, he seeks this himself. However, Nutrena will help him on pullet purchasing and with feed financing. Nutrena can furnish an egg producer with 20-week-old, ready-to-lay pullets at approximately $1.60 per hen, said Mr. Wetzel.

Mr. Wetzel, whose father founded the produce firm in 1918, erected a six-tank bulk feed station (capacity each tank, 25 tons) two years ago. Since then, his total feed volume has tripled. Both bag and bulk have shared the increase. Mr. Wetzel attributes the volume rise to the egg quality program, bulk service and more intensive merchandising of feed.

Egg producers on the Wetzel egg program agree to specific management and egg handling procedures and to the use of recommended Nutrena feeds. In return, producers are guaranteed a market and also premiums of various types. With the Nutrena hi-density houses and an automated labor system for birds from controlled breeding stock living in controlled environment from birth, and being fed a specified diet, these egg premiums are expected to be

EGG HAULING—Three refrigerated semi trucks like the one shown here are used by Wetzel Produce Corp., Sauk City, Wis., to haul eggs to Milwaukee, Chicago and other midwestern markets.



EGG PRODUCTION SYSTEM—This photo shows Nutrena's new "high density layer system," which employs automated equipment to ventilate, feed, water, nest, light and gather eggs from 10,000 closely grouped birds. Wetzel Produce Corp. at Sauk City, Wis., is using such a system in its egg program.

CHECKING A FEED SALES PROGRAM—A. Wetzel (left), president of Wetzel Produce Corp. at Sauk City, Wis., checks over a feed sales program for his area with M. E. Rudolph, Nutrena sales manager for Wisconsin and southeastern Minnesota.

higher than in most other types of poultry programs, according to Mr. Wetzel.

Wetzel egg producers are now receiving the following premiums: 2¢ per dozen for feeding Nutrena rations; 1¢ per dozen cooler premium, plus a volume premium on quality eggs. Mr. Wetzel emphasizes that under this system, the egg producer with only 100 chickens can receive premiums on his output just as does the large producer.

Laying House Described

Many egg producers from various parts of Wisconsin visit the Nutrena pilot house, a mile west of Sauk City. Here, a unique ventilating system for the windowless pole type house allows space for birds to be reduced to ¾ of a square foot. Thermostatically controlled fans force air from the building and atmospheric pressure forces fresh air in. The house is constructed so that one layer of air circulates under the roof in a 5 in. space between the roof and a layer of insulation. Other air is distributed evenly and circulated throughout the house.

Thus, with this system, temperatures in the laying house can be maintained above 50° the year around. Air is changed about every eight minutes during the winter and can be changed in less than two minutes during the summer.

The building is lined with a white plastic-coated roofing paper. This makes possible a higher level of light intensity with a lower level light source and is easier to clean than other conventional forms of wall covering, said Mr. Wetzel.

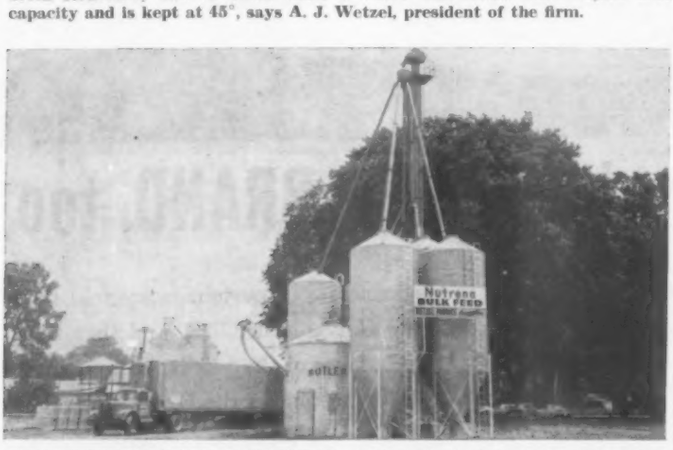
A rat-proof concrete barrier at the base of the building is also a feature. The layers are housed on a slatted wooden floor 3 ft. above ground level. Droppings fall into the space below the floor and are air-dried and removed. At time of removal, about 50% is dry manure. This manure is sold or disposed of in other ways. Poultry manure from such an operation is valued at about $10 per ton.

Flock Management

The laying flock in the pilot house is divided into wired off pens of 500 birds, which in turn are separated by watering and feeding equipment into communes, so to speak. Waterers and feed troughs have electrically charged wires above them to discourage birds from perching and fouling water or feed with droppings. According to Sylvester Brennig, pilot house manager, 10,000 layers use about 1¼ tons of feed a day augered out of a 7-ton Butler storage tank into the automated feeding system.

Nests on both sides of a 500 hen pen are level with the floor. When eggs are laid, they roll forward onto a carrier belt, thus minimizing dirtying the egg shell. When the time clock indicates bedtime for the layers, the rear plate of the nest moves forward, gently pushing nesting hens

LOAD OUT AREA—This view shows egg load out area at Wetzel Produce Corp. in Sauk City, Wis. Refrigerated trucks load out of cooler (housed by brick structure) two or three times a week. The cooler has a 3,500 case capacity and is kept at 45°, says A. J. Wetzel, president of the firm.



BULK FEED STATION FACILITIES—This bulk feed station, erected two years ago by Wetzel Produce Corp. at Sauk City, Wis., contains complete poultry feeds for distribution to the firm's pilot house and other egg producers.

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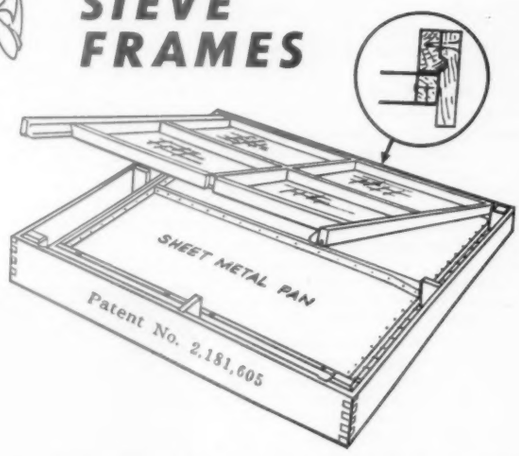

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out to join the other hens on the floor. A time clock also controls the turning on of lights. In early June, the hens were getting 14 hours of light per day.

Mr. Rudolph, commenting on the division of layers into groups within a 500 pen area of the house, says that experiments at the Nutrena Elk River, Minn., research farm indicate that hens like to congregate in groups and will seldom move outside such groupings after habit patterns have been formed.

The Sauk City pilot house has less than 2% of floor eggs. These are gathered by the plant manager four times per day.

Other Plant Features

The plant has its own deep well. A special tank for medicating water is also available for instant use. All water used in the house is metered and recorded, as is feed consumption. Thus, by studying the water and feed records, the manager can spot a lowered consumption of these items which may precede a disease condition. He can then take preventive measures in medicated feed and water, states Mr. Rudolph.

Eggs are cleaned as they come off the belt conveyor, then packed in cases and placed in a cooler room. Their next destination is the Wetzel plant.

The pilot house also has a stand-by power plant. It is a 10 KW surplus unit and was purchased for this project for $800. Should utility power fail, a telephone warning bell rings and the manager can come and start the stand-by plant.

1,500 Egg Producers

Wetzel Produce Corp. has 12 Ford trucks with insulated bodies for egg pickup and feed transport. The trucks travel approximately 500,000 miles annually. Each truck holds 210 cases of eggs and 3 tons of bagged feed. Each truck makes stops at 50 egg producers per day, covering a different route daily. Total stops per week are 250 for each truck. The Wetzel firm collects eggs from 1,500 Wisconsin farmers.

The Wetzel firm also has three refrigerated semi-trailer units, each powered with a Ford tractor. These semis haul Wetzel market eggs to Milwaukee, Chicago and other midwestern points. The semis carry 600 cases per load per trailer. The units also have Thermo King heating and cooling equipment. "Wetzel's was the first firm in Wisconsin to use this equipment on trucks," Mr. Wetzel stated.

Eggs arriving from producers are unloaded and stored in a 50° cooler which will handle 2,500 cases of eggs daily. From here, the eggs go to the candling line. The Grade A eggs go to the conveyor line for sorting according to size and then into cartons. Mr. Wetzel reports that since the egg quality program has been pushed in recent years, his plant has been able to eliminate two flash candlers due to quicker and better egg handling.

A government inspector is stationed at the plant. He checks a percentage of processed eggs that come off the conveyor line to make certain government standards are met.

The finished product cooler has a capacity of 3,500 cases and is kept at 45°. Semis load out of this cooler two or three times per week.

"We always use new cases and supplies in our packing operations," says Mr. Wetzel. "Re-used cases, etc., have no place in our quality program." He goes on to say, "When the Nutrena program gets going with 10 houses, our quality egg output will jump considerably. And we are equipped to handle the extra volume."

Commercial Laying Hen Numbers Continue Increase in West Texas

BIG SPRING, TEXAS—Commercial laying hens continue to increase in west Texas, though most of this is in the enlargement of existing flocks, it was reported. Biggest increase will be at the Clary Egg Co. at Lubbock. The company is building poultry houses at nearby Shallowater, which will eventually hold 100,000 hens.

Also at Lubbock, the Robnett Egg Farms has increased its number of caged hens until the present number is more than 185,000. N. J. Robnett, in business only a few years, is now reported to be the largest poultry operator in west Texas. He also has a pullet farm near Tahoka, Texas, and laying houses at Midland.

A third farm increasing its laying hens is the John Davis Feed Store of Big Spring. Mr. Davis has been managing 10,000 hens and selling the eggs locally and through the store. Within recent weeks he has started two more houses which will hold another 5,000 hens.

There are very few, if any, completely integrated poultry firms in west Texas, a news source said. Most of them buy baby chicks from recognized hatcheries and get their feed concentrates from large mills. Mr. Robnett buys a mineral and protein supplement and mixes it with west Texas grain sorghum, while the Davis Feed Store hauls a complete feed from a mill in Lubbock.

NEW OPERATION

SHELBYVILLE, TENN. — Charlie C. Rogers of Rogers Mobile Feed Service has announced a new mobile feed milling service. Mr. Rogers handles Nutrena feeds and will use his new Seco mobile mill to promote concentrate and supplement sales in on-the-farm milling services, the announcement noted.

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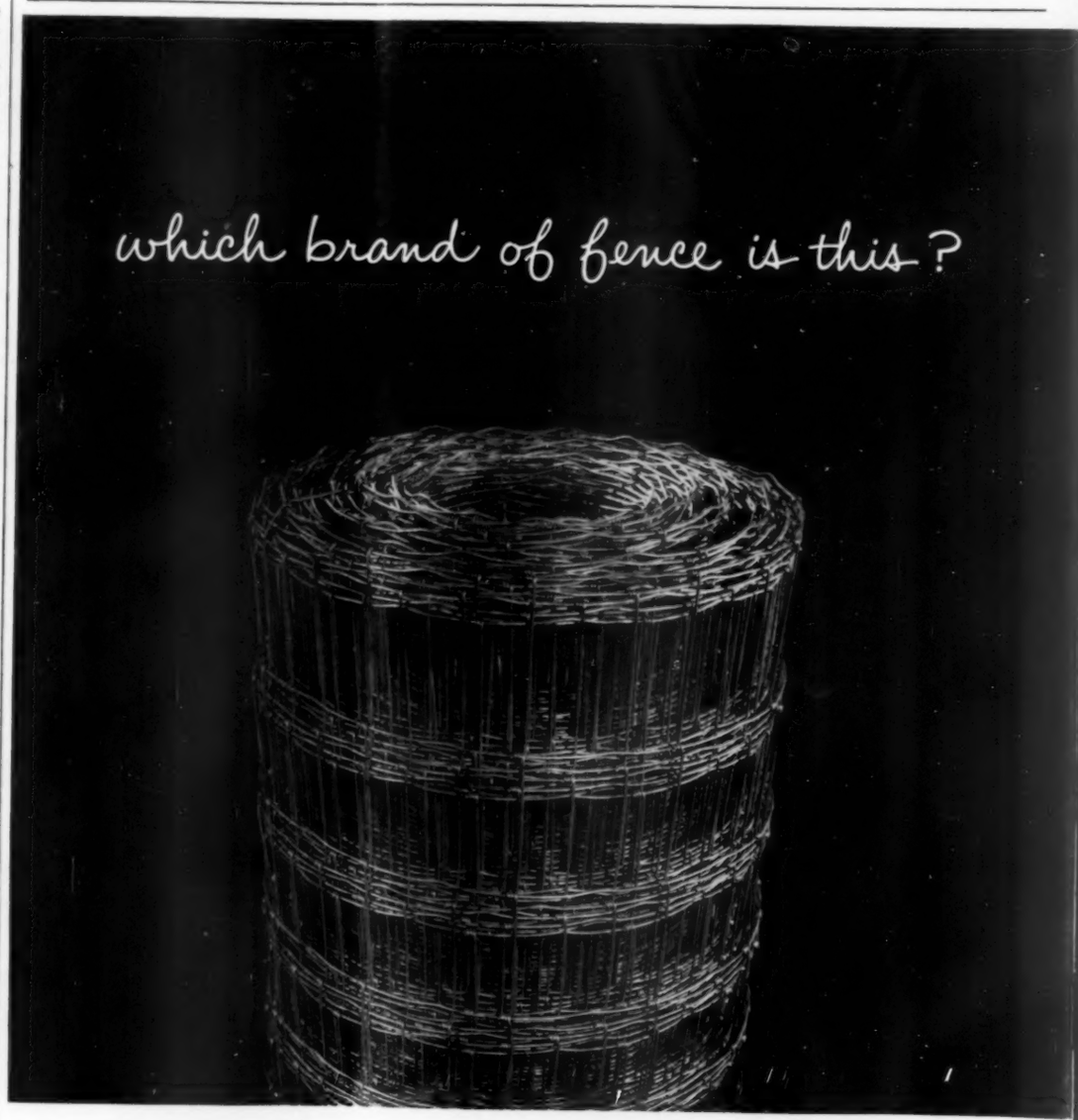

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To Feature New Feed Story at AFMA Public Relations Event

CHICAGO — The first "unveiling" of the new feed industry story, "Mightier Than Missiles," will be a featured attraction at an industry-wide Feed Industry Public Relations Conference Oct. 18 in Chicago. The event, which is sponsored by the American Feed Manufacturers Assn., Chicago, will be held in The Water Tower Inn. Everyone interested in public relations is invited to attend, AFMA said.

The industry story, which is a basic presentation of the feed industry and its importance to agriculture and the nation, is being prepared in an attractive, well illustrated booklet, and in a set of colored slides (complete with script) for use by feed men in talks before rural and urban audiences.

The conference, which is being held for the second time in three years, will also feature 12 speakers and subjects of current interest to the feed industry.

First speaker on the morning program will be R. L. Kathe, AFMA director of public relations, who will discuss "Why We Are Here." He will be followed by a panel discussion on "Public Relations Problems and Opportunities." Panel moderator will be William R. Pearce, assistant vice president, public relations department, Cargill, Inc., Minneapolis. Speakers and their subjects include: Dr. Robert R. Spitzer, president of Murphy Products Co., Burlington, Wis., "Viewed by Management"; Dexter Obenhaus, owner, Community Feed Mill, Princeton, Ill., "The Smaller Company Approach"; J. D. Sykes, vice president, Ralston Purina Co., St. Louis, "Working Through Associations," and Paul Johnson, editor, The Prairie Farmer, Chicago, "As Seen by the Farm Press and Radio."

Also to speak at the morning session are Dr. H. F. Lionberger, department of rural sociology, University of Missouri, Columbia, "How Farmers Adopt New Ideas"; and Charles Hackett, executive assistant, public relations department, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., "Propaganda-Building Ideas with Symbols and Policy."

W. E. Glennon, AFMA president, will speak at the noon luncheon.

"Chasing Agricultural Public Relations Rainbows" will be the afternoon topic discussed by Frank Neu, director of public relations, American Dairy Assn., Chicago.

Other afternoon topics and speakers will include: "Creating Better News," Jim Bowe, account executive, Carl Byoir & Associates, Minneapolis; "Your Booklets Should Be Read," Jack Haskin, director of research, Curtis Publishing Co., Philadelphia, and "Mightier Than Missiles," W. T. Diamond, AFMA secretary-treasurer.

Seattle Poultry Co. Sold to Nordquist Feed Mills, Redmond, Wash.

REDMOND, WASH. — Nordquist Feed Mills, Redmond, has announced purchase of the Seattle (Wash.) Poultry Co., which will be used as the final cog in the wheel of a farm-to-market program of fryers, company officials reported.

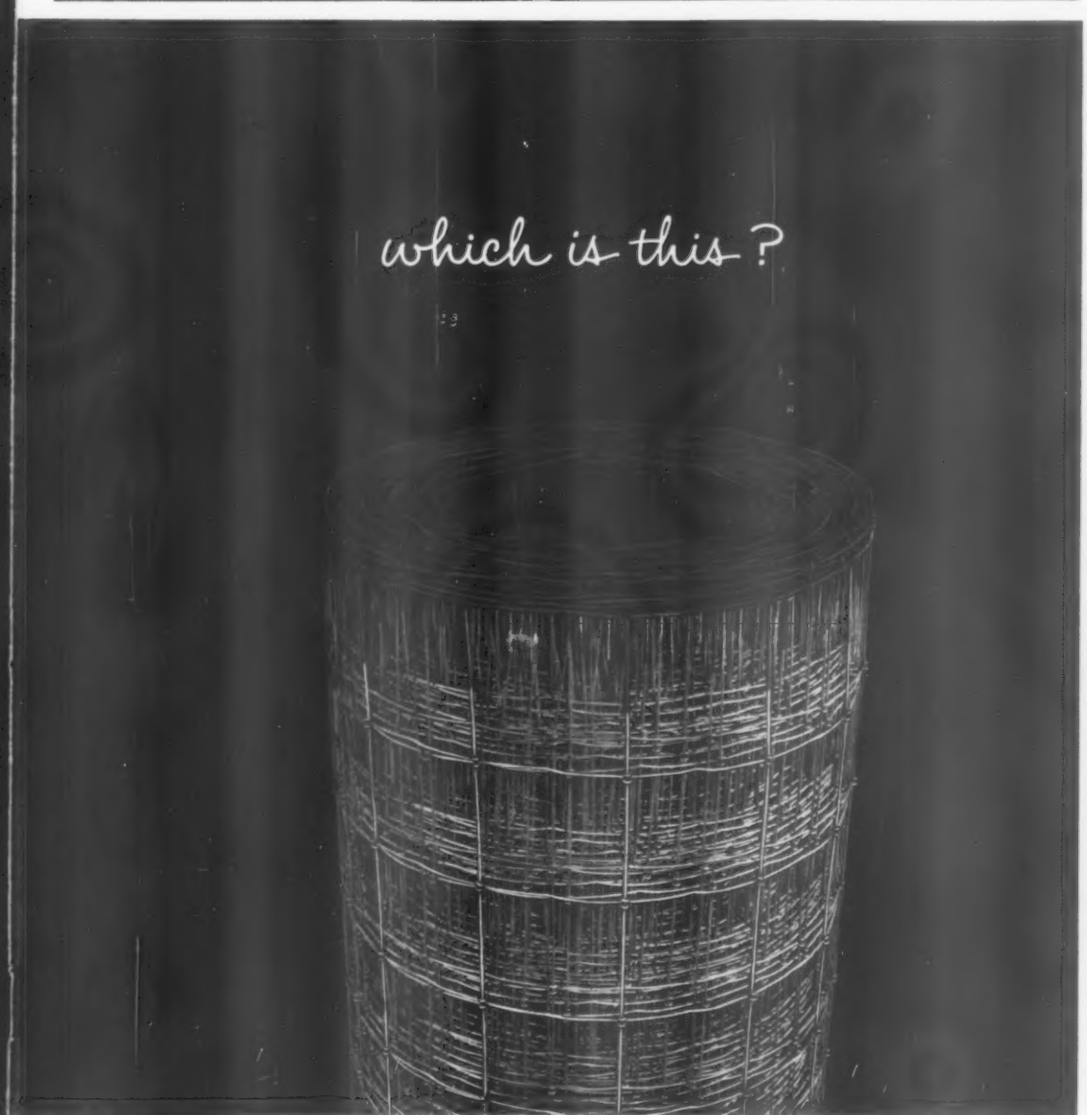
Seattle Poultry was purchased from Roy Frankhouser, an old timer in the poultry processing business. The plant is the oldest of its kind in the area.

In announcing the purchase, Nordquist Feed Mills officials stated, "Competition from the South, where so-called integrated programs have been in effect for some time, has made it necessary for local companies to drastically change their methods in regard to the growing, feeding and marketing phases of the industry."

Nordquist Feed Mills now controls the farm growing of nearly 2 million birds a year. These are going to market on the average of 9½ weeks, and provided Seattle Poultry Co. with a supply of 35,000 birds per week. A large share of this supply comes from the W. H. Sween farm, which was recently leased by Nordquist Feed Mills. This farm has a capacity of 117,000 birds.

Among other company-owned farms is a unit located in Carnation that is described as a model of efficiency. One man manages this operation of 55,000 birds. Officials said that Nordquist has also retained some of the most outstanding individual growers of the Seattle area in its new program.

Foster Wick, who has been associated with Seattle Poultry Co. for 10 years, will serve as the new operations manager. Mel Erickson, Redmond, will be in charge of sales. Following a vacation and rest, retiring owner, Mr. Frankhouser, is expected to return to the managerial end of the firm.



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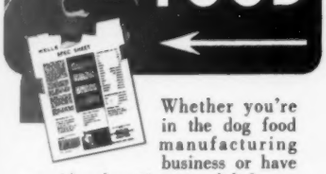

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Form Group to Stop 'Disappearing Farm Land' in California

SACRAMENTO, CAL.—State assemblyman Paul Lunardi (D., Roseville) has announced formation of a statewide committee to stop a "growing economic menace, the rapidly disappearing farmlands of California."

Mr. Lunardi is principal author of the initiative in the State Legislature and is chairman of the executive committee of "California Citizens for ACA-4." Mr. Lunardi said that the initiative will eventually be known as "Proposition 4" on the general election ballot in November, 1962.

Appeals for support are going especially to cattle and other livestock feeders and dairymen who are suffering from the population explosion quite seriously. "In the past 20 years, over 2 million prime California productive acres have been swallowed up by subdivisions, industries, or other non-agricultural uses," he said.

Since 1954, more than 26,000 California farmers have been driven off the land by the march of suburbia—and bulldozers.

The plight has become so acute in some areas of the state that farm groups and dairymen have organized and taken serious steps to keep their land from being swallowed up by subdivisions and other unplanned urban land uses.

In Los Angeles County, for instance, dairy farmers incorporated three areas about two years ago for purpose of controlling the spread of industry and to keep the taxes down so that the farms could be economically run.

Santa Clara County farmers and dairymen, to cite another example, have established a "greenbelt zone" with no industry and low taxes.

In Marin County, dairy areas near spreading tract developments face ruinous taxes. It's reportedly making business rough for cattle feeders and grain processors. When the dairy people leave (there's been a gradual trend to move to the San Joaquin Valley), the market diminishes for the feed, grain and related industries. Reports from farmers in the Hayward area, across the bay from Marin, also indicate that encroaching builders are leaving little land for farming.

Unfair Tax Structure

Opponents of the present tax setup say that the land tax structure is grossly unfair. They point out the fact that as soon as one subdivision enters an area, all land is taxed at rates so fantastically high that farming becomes economically impossible.

Proposition 4 will allow county assessors to tax farm land on its taxable value for farming purposes only, providing that a farmer, upon application with the assessor, agrees to pay back the difference between the current market value and the land use value.

The lien on farm land will be on the simple fee owner, says Mr. Lunardi, not to exceed seven years in the event that the application should exceed the seven-year period.

The legislator further stated that if the land is sold in less than seven years, the assessment will be prorated by the assessor according to the number of years of application.

Proponents of the proposition say that the city dweller will be one of the major beneficiaries. They point out that at the rate state farm land is disappearing, Californians will soon have to import food that is now raised here.

Mr. Lunardi explained that various campaign committees will be organized in each of the state's 58 counties with major offices in San Francisco, Los Angeles, San Diego, Fresno and other metropolitan areas. Pat Martin, Sacramento, and his staff have been engaged to handle the campaign for Proposition 4.

The chairman pointed out another problem created by unplanned suburbia. Often, new subdivisions, through their demands for schools and services, consume more taxes than they produce.

"Proposition 4 will change all this," said Mr. Lunardi. "Farmers will be able to continue producing wealth and paying taxes to the counties. The new subdivisions will be diverted away from prime farm land to undeveloped areas unsuited for agriculture, but suitable for subdivision or industrial uses. Thus, previously worthless land will add to the county's tax income. The county will have a tax gain at least equal to the amount lost by driving out the farmers," Mr. Lunardi said.

Headquarters for the statewide campaign will be at the Senator Hotel, Sacramento.

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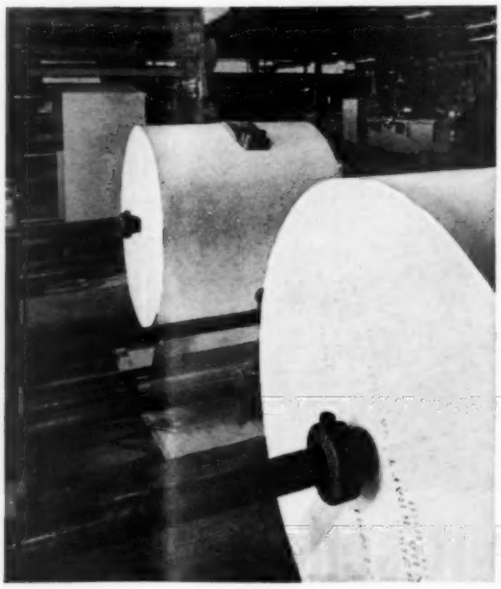

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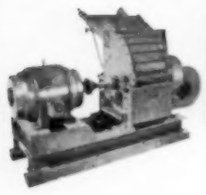

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SELLIN' SAM — By Jim Zilverberg

"Come on in—this is my day to see the salesmen!"

N.J. Poultrymen Hear Predictions On Egg Production

NORMA, N.J.—Smaller hens that will lay larger eggs were among the poultry industry developments predicted by Samuel M. Golden in a talk before members of the Farmers Cooperative Assn. of Vineland, N.J. Mr. Golden's complete address was broadcast over the Vineland radio station.

In addition to reviewing major past and present developments in the egg production industry, Mr. Golden offered certain predictions for the future. Among the predictions were these:

Development of smaller hens which will lay larger eggs—The Japanese Coturnix quail, now being used for research, start laying eggs at 35 days of age. They weigh 130 gm. adult size. Eggs from mature females weigh 9 gm. This is 7% of their body weight, compared with a chicken egg, which is 3% of the body weight. The quail will lay 250 eggs a year. If chickens can be influenced to perform like these quail, they should lay eggs more than twice as large as at present, or we should get the same size eggs from hens having a 2 lb. mature weight instead of 4 lb. The geneticist may eventually succeed in getting chickens to perform like the quail.

Replacement chicks will be raised like broilers—There will be fast, efficient growth and rapid maturity with a minimum feed cost per bird. Replacement chick rations are due for a dramatic change. While replacement chicks are now fed high fiber rations to slow development, in the future we will raise replacement birds to arrive at earlier maturity and still get high production and large eggs.

Future rations will be formulated with a minimum of fiber. This will reduce pullet costs and bring earlier production. By genetic selection of early maturing pullets that will lay large eggs early, we can grow pullets like broilers.

The present trend of specialists that raise replacement pullets and sell them to egg farmers will fit this type of program. Egg yolk pigmentation will be achieved by using natural xanthophyll concentrates or synthetic pigments in the feed.

On-the-farm egg processing—Present systems of washing and crating eggs, shipping to grading stations, uncrating, grading and candling, putting back the eggs in packages and re-crating are inefficient. Some egg farms are becoming large enough to handle this entire operation automatically at the farm level.

Hormone feeding or injection—The follicle stimulating hormone progesterone or other hormones will be used, either in the feed or via injection. These hormone agents will stimulate egg production and supplement the hens' hormone levels late in the egg producing cycle when production normally drops.

Disease prevention — Through use of mass immunization, the same as now used for Newcastle and bronchitis, there will be disease prevention rather than treatment. Also, increasing disease resistance through improved nutrition will be practiced. For example, higher vitamin A levels increase resistance to coccidiosis and respiratory infections and may help prevent worm infections.

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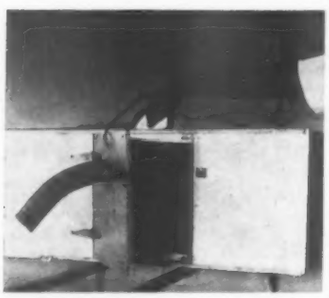
Zone Ventilation for Farrowing Stalls Studied by Iowa State Nutritionists

AMES, IOWA—Agricultural engineers and nutritionists at Iowa State University here are finding that keeping sows cool with zone ventilation holds down restlessness and loss of appetite.

The zone cooling system being experimented with gives an air bath over the head and back of the sow. And, the agricultural engineers say they are ventilating one-fourth to one-third less total air-moving capacity than required with exhaust fans.

Zone ventilating also eliminates stagnant air pockets and blind spots, according to the engineers and nutritionists. It reduces odor and moisture problems, and there is no need to worry about over or under ventilating any part of the building, according to the researchers.

Dr. Thamon Hazen and Duane Mangold, agricultural engineers, say the system also eliminates heat stress.



AIR DUCT—This zone ventilating system developed at Iowa State University is reported to cost about $20 per stall to build. Workers at the university's swine nutrition farm say air moves through the plywood duct and is piped to the sow through a blower with a flexible metal tube.

The system includes a fresh air duct running along 10 farrowing pens with an adjustable pipe located above each sow's head. In the duct there is a small blower attached to each adjustable pipe. In warm weather this pipe is turned downward so the sow can bathe in the air when she stands or escape it by lying down. During the winter, this pipe is pointed upward to keep drafts off the sow and her pigs, the engineers said. They say, "Baby pigs are never exposed to chilling air blasts or drafts—often a shortcoming of space ventilation."

Last summer uncooled air was used to compare zone ventilation with the exhaust fan system, the researchers say. Zone-ventilated sows ate regularly and were comfortable up to temperatures between 80° and 85°, they reported.

Meanwhile, on the other side of the house, sows under general ventilation became restless and lost their appetites, the researchers pointed out.

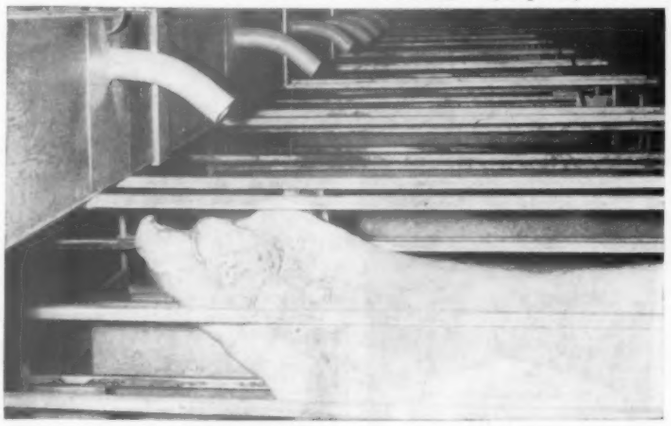
Cooled Air

Currently engineers are trying to find out how well zone ventilation using mechanically cooled air will perform when the outside air is above 85°. They believe this is the level where air conditioning may pay off.

By placing the cooled air, instead of installing space cooling, it takes only one 1-ton air conditioner to keep 10 sows bathing in 75-80° temperatures—regardless of the outside heat, the engineers say.

Another Iowa State test showed that it required almost 10 times as much air conditioning to space-cool the same area.

Cooling costs will vary with the humidity, the study shows. A refrigeration-type cooling unit with dehumidifying action is needed to remove excess moisture from the air in the eastern half of the U.S. In the drier, western half of the country, Dr. Hazen and Mr. Mangold say, less expensive evaporative cooling can be used.



AIR COOLED SOWS—Iowa State University researchers have found that piping cool air downward into the farrowing stalls during the summer eliminates heat stress on the sow. In the winter, the flexible tube is turned up to keep drafts off the pigs and give positive pressurization of the building, according to the research men.

Winter Application

When cold weather comes, the zone blowers and space heater are thermostatically controlled to complement each other in this study.

The blowers pipe 80 cu. ft. of high-velocity air per minute. This gives positive pressurization and prevents space heater fumes from being sucked back into the building, the engineers said.

It also keeps the farrowing house "cracker dry," they said. The fast-moving dry air traps moisture and carries it outside before it can condense on the walls and floor. In fact, while many folks were fighting dampness last winter, Dr. Hazen and Mr. Mangold report, they were worried about their building being too dry!

Researchers are now trying to learn what effects zone ventilation has on baby pig growth, survival at weaning, and sow comfort.

The force behind zone ventilation is supplied by 0.7 ampere, 3,050 rpm electric blowers. A 10-sow system requires 10 flexible metal tubes and blowers, a duct, electrical wiring and a thermostat. The entire system can be built for about $20 per stall.

The duct can be made of plywood, and the Iowa State researchers recommend insulating the inside to prevent condensation. One inch stryrofoam was used in the experimental unit.

Centennial Nutrition Conference + FEEDSTUFFS Serving the formula feed industry = FEEDSTUFFS' *Centennial Issue*

The Midwest Centennial Nutrition Conference to be held in the Muehlebach Hotel in Kansas City, October 23-25, is part of a year-long program commemorating the service of our land-grant institutions, their accomplishments and potential, in an effort to build public understanding of the land-grant principle and to evaluate the work now being done in these institutions.

Eight Midwest universities will participate in the Nutrition Conference. Their authorities will speak on a variety of nutritional subjects, including:

- The Contribution of Research to Animal and Human Nutrition
- The Role of Agricultural Research in our National Economy
- Minerals in Poultry and Livestock Nutrition
- Radioactive Fallout
- Problems Concerned with Feed Additives
- Carbohydrates in Ruminant Nutrition
- Factors Affecting Bloat
- Careers in Agriculture
- Proteins and Amino Acids in Broiler, Laying Hen, Turkey, Swine and Ruminant Nutrition
- Fats and Fatty Acids in Swine Nutrition
- Anti-Metabolites in Animal Nutrition
- Human Nutrition Status in the U.S.
- Agriculture in the U.S. Economy

For this important Conference, FEEDSTUFFS offers you a Special Centennial Issue. Because of the demand for information on research and its value to the formula feed industry, FEEDSTUFFS has asked for reports and summaries of current and projected research from authorities at each of the eight participating universities.

Response to this request has been very enthusiastic, which means an impressive roundup of current research efforts. Along with these summaries, FEEDSTUFFS will include features on the land-grant principle and its contribution to the national welfare.

NOTE TO ADVERTISERS:

The interest created by the Conference, plus FEEDSTUFFS thorough editorial coverage and extra distribution, makes this an unusual opportunity for advertisers. Issue date for FEEDSTUFFS Centennial Edition is Oct. 21; advertising deadline, Oct. 9.

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(Continued from page 11)

Supply Co., Bloomington, Ill.; R. W. Fredrikson, Strong-Scott Manufacturing Co., Minneapolis; Roy Robinson, California Pellet Mill Co., Crawfordsville, Ind.; W. L. Hamilton, Richardson Scale Co., LaGrange, Ill.; John H. Wessman, Grain Processing Machinery Manufacturers Assn., Kansas City, and Eugene Gehrig, Feeds Illustrated magazine, Chicago.

Standards are listed in this chapter for equipment suggested for use in 30-ton, 100-ton, 200-ton and 400-ton mills. Purposes, descriptions, engineering specifications, capacity and power requirements, if applicable, are included in technical detail for receiving, processing, pelleting, bagging, weighing, loading and optional equipment.

CHAPTER 7, OPERATING STANDARDS—It is the objective of this chapter to illustrate the application of proven management analysis tools to feed production operations. These procedures, according to authors of sections in this chapter, may be applied to any size of production unit to establish manpower requirements, operating organization, operating labor costs and operating job instructions.

The introduction to this chapter states: "The approach to the problem of manpower assignment and organization in each of the four mills analyzed is basically the same. However, as mill size and complexity increase, it becomes necessary to expand the analysis."

It is explained that a seven-step approach was used to establish operating standards for each of the four sizes of mills. These steps are: Definition of problem, determination of mill operations, work time determination, time assignment, job assignment, job description and cost center analysis. (A cost center is defined in the chapter as "a subdivision of mill accounting, which by definition, contains all and only those plant costs which are assigned to it." Cost centers are established for convenience of comparison between operations in different feed plants.)

Following are excerpts from the chapter's introduction which will help explain what each of the seven steps involves and how the resulting information can be used in practice.

Step 1: Definition of Problem. From a careful study of the mill flow, design, product variety and operating conditions, the mill operations are established.

Step 2: Determination of Mill Operations. After individual mill operations have been determined, they are listed so that operating time can be assigned. Each of these operations is subdivided into performance units, such as per car, per unit of weight, or per unit of time, such as day, hour or minute.

Step 3: Work Time Determination. Once the individual mill operations and performance units have been established, the number of occurrences per day of each of these performance units is determined. This is done by studying the mill requirements from received goods through processing and production, to housekeeping, maintenance and supervision.

Step 4: Time Assignment. The number of minutes or hours required to perform each unit of mill operation is determined in this step either by time study or by estimating the number of minutes required.

After the work units, the number of occurrences of these work units and the time allowed for each occurrence have been determined, it is a simple matter to multiply the occurrences by the time allowed per occurrence to determine the total minutes of work required to perform the operation.

Summation of work minutes results in a total required work time for the mill. To this time must be added nonproductive time such as allowances for miscellaneous work and delays, supervision time, maintenance time and housekeeping time.

To determine the manpower required to operate a mill, divide the total work time by the work time each man has available.

Step 5: Job Assignment. Work time is assigned to each job to equitably distribute mill operations and prevent overloading or underloading of any job. After jobs are assigned to work areas, an organization chart outlining the flow of management responsibility is established.

Here's an example of how a job assignment detail might read:

"Grain processing job: Start and stop grinder—set up flow, start and stop grinder, adjust as necessary and record; operate machine—check grind, check flow and operate conveying equipment."

Step 6: Job Description. Each job in the mill is described in detail and completely. Job functions used in the Feed Production Handbook are: Supervisory, planning, operating, quality, maintenance, machine care, housekeeping, safety, training, reporting and clerical and miscellaneous.

The following is an example of a typical job description:

"BULK LOADER—This is not to be construed as a fixed job description, but will change as conditions, methods, machinery, ingredients and other job factors change.

"Job responsible to..... working leadman.

"Operating Duties:

"1. Bulk loading—(a) Receive orders from office on trucks to be loaded; (b) direct truck driver in locating his truck under bulk loading bins; (c) weigh truck in and out and punch scale tickets; (d) operate gates under bins to load correct amount of feed in truck, etc. . . .

"2. Unloading sack—(a) Line up unloading and receiving of bagged goods and supplies; (b) assist in spotting trucks at receiving door and place and remove dock plates, etc. . . .

"Housekeeping Duties:

"1. Pick up trash, sweep and clean lunch room, locker room and lavatory once per day.

"2. Clean sanitary fixtures and handle washroom supplies as necessary daily.

"3. Disinfect showers and fixtures daily.

"Quality Duties:

"1. The last pereson to see the feed as it leaves the mill is the bulk loader. It is his responsibility to know the company quality standards; to inspect each item as loaded, and to notify the working leadman immediately if a quality problem arises.

"Miscellaneaus Duties:

"1. Any and all other jobs assigned."

Step 7: Cost Center Analysis. Cost centers to which jobs were assigned in theoretical application by the authors of the operating standards chapter are: Ingredient receiving, grain processing, mixing, pelleting, packing, warehousing and maintenance.

The seven-step procedure was followed by D. Hewitt Chandler, Consumers Cooperative Assn., Kansas City, in preparation of 30-ton mill operating standards; by Tom J. Hoover, Walnut Grove Products Co., Inc., Atlantic, Iowa, for 100-ton mill operating standards; by J. D. (Don) Johnson, General Mills, Inc., Minneapolis, for 200-ton mill standards, and by Henry C. Kraemer, Dough-

GFDNA DIRECTORS MEET—The board of directors of the Grain & Feed Dealers National Assn., Washington, met recently in Chicago for the first mid-year meeting of its kind. The board, which in past years has met only during the annual convention, studied problems and challenges facing the industry. Directors shown here are:

Front row, left to right: Charles Force, GFDNA president, Little Brothers, Kalamazoo, Mich; Sam Rice, Jr., GFDNA third vice president, Rice Grain Co., Toledo, Ohio; Madison Clement, GFDNA chairman of executive committee, Clement Grain Co., Waco, Texas; Alvin E. Oliver, GFDNA executive vice president, Washington, D. C.; H. V. Nootbaar, GFDNA first vice president, H. V. Nootbaar & Co., Pasadena, Cal.; Floyd Poyzer, Amenia (N.D.) Seed & Grain Co.; Price Fenquay, Fenquay Elevator Co., Enid, Okla., and Herbert L. Sharp, GFDNA secretary-treasurer, Washington, D.C.

Second row, left to right: Lloyd Case, Burdick Grain Co., Minneapolis; J. Floyd Chance, Gooch Milling & Elevator Co., Lincoln, Neb.; James Hogan, Ralston Purina Co., St. Louis; Jerome Vanice, Vanice Grain, Inc., Omaha; George Forrester, Forrester Grain Co., Toledo; R. C. Woodworth, Cargill, Inc., Minneapolis; Ray Bohnsack, Michigan Feed & Grain Dealers Assn., Farm Bureau Services, Lansing, Mich.; Eugene Byer, Farmers Grain & Feed Co., Inc., Columbia City, Ind.; L. S. White, Arkansas Drier & Warehouseman's Assn., Helena (Ark.) Rice Drier, Inc.; Dean Daniels, McMaster Grain Co., Sioux City, Iowa, and E. B. Evans, Evans Grain Co., Decatur, Ill.

Third row, left to right: Bruce Hagemeister, Hagemeister's, Hemingford, Neb.; Warren Root, The Root Grain Co., Kansas City; Cliff Simmons, Pacific Northwest Grain Dealers, Rockford (Wash.) Grain Growers; David E. McKee, C-G-F Grain Co., Inc., Topeka, Kansas; B. C. Swanson, Western Grain & Feed Assn. of Iowa, Swanson Elevator, New Sharon, Iowa; J. D. Lindsey, Lindsey Bonded Warehouse Co., Bernice, La.; Emory Cocke, Cocke & Co., Atlanta, Ga.; Hamill Varner, Quaker Oats Co., Chicago; Richard Westley, Central Soya Co., Inc., Ft. Wayne, Ind., and Robert Rudy, S. J. Rudy & Sons, Covington, Ohio.

Fourth row, left to right: E. O. Wheeler, Oklahoma Grain & Feed Dealers Assn., Wheeler Brothers Grain Co., Inc., Watonga, Okla.; Warren LeBourveau, Mathis (Texas) Grain & Elevator Corp.; W. C. Theis, Simonds-Shields-Theis Grain Co., Kansas City; L. D. Ritchey, Pennsylvania Millers & Feed Dealers Assn., Curry Supply Co., Curryville, Pa.; C. W. Fliginger, Cargill, Inc., Sioux City, Iowa; Russell W. Brown, Indiana Grain & Feed Dealers Assn., Farmers Grain Co., Carlos, Ind., and Ivan R. Miller, Illinois Feed Assn., Crawford County Farmers Exchange, Robinson, Ill.

Back row, left to right: Ralph Hegman, Kellogg Commission Co., Minneapolis; C. Langdon McMillan, Osborne McMillan Elevator Co., Minneapolis; T. R. Magowan, Nebraska Grain & Feed Dealers Assn., Magowan Grain Co., Gordon, Neb.; J. D. Urquhart, Union Elevator & Warehouse Co., Inc., Lind, Wash.; Frank Heffelfinger, H. F. H. Peavey & Co., Minneapolis; Leon McCorkle, Marion (Ohio) County Farm Bureau Coop. Assn., Inc.; Dave Crutchfield, Crutchfield Grain & Feed, Yeoman, Ind., and George Moorehead, Ohio Grain & Feed Dealers Assn., Inc., The Moorhead Elevator Co., Leipsic, Ohio.

boy Industries, New Richmond, Wis., for 400-ton mill standards.

CHAPTER 8, RECORD SYSTEMS FOR OPERATING CONTROL.

Introduction, by the late Dr. V. John Brensike, U.S. Department of Agriculture—This chapter establishes a relatively simple record-keeping system to help production managers or foremen to measure plant costs and efficiencies.

"In order to be most helpful to management, records and procedures must result in reports which reflect plant operations in a meaningful manner," Dr. Brensike wrote before his death this summer. "A report which shows an increase or decrease in the total of labor cost per unit of feed produced is not nearly so helpful as one which also assists management to determine that these cost changes occurred in the mixing, packing or warehousing operation or cost center. . . ."

Development of Labor Cost Records, by Erwin C. Wascher, Honeggers' & Co., Fairbury, Ill. — Mr. Wascher discusses sources of information for labor costs (the amount of labor expended and the amount of work performed), allocating maintenance labor expense, allocating supervisor time and day-to-day use of records by supervisors.

Fixed and Other Variable Costs, by Charles W. Glenn, Midwest Research Institute, Kansas City — Mr. Glenn explains methods for allocating new or existing accounting data to the six cost centers of receiving, processing, mixing, pelleting, packing and warehousing.

Studies of Relative Efficiency, by the late Dr. Brensike—The relative efficiency of various operations within a feed mill can be determined by: Day-to-day, week-to-week or year-to-year comparisons within the same plant; comparing records of any given cost center in one plant with those of another plant, and by comparing an individual plant's data with industry standards.

Cost Records and Management Decision, by Dr. Richard Phillips, Iowa State University, Ames—"In addition to their value for appraising and improving operations, cost center records on feed production are an important tool for managerial evaluation and decision making," Dr. Phillips notes in the introduction to his contribution to the chapter on records systems for operating control.

"Records of operation costs in a given plant reflect actual productivities of men and machines within this plant and its environment. They reflect local rates for labor, power, taxes, insurance and other cost items. They reflect transportation and other plant specific market factors, for both raw products and finished feeds. Because it is tailored to local circumstances, information from cost center records can take the guesswork out of over-all mill management far more than information from any other source.

"Cost records provide vital information for practically every kind of management decision, from hiring personnel to investing in facilities; from planning sales to laying out cash flows and the capital structure of the company."

Dr. Phillips noted that his discussion of how to use records in decision making is limited to their application for four types of decisions: (1) Relating cost and profits to volume changes, (2) reorganization within cost centers, (3) job evaluation and personnel planning and (4) planning capital expenditures.

CHAPTER 9, PRODUCTS CONTROL.

Products Control of Feeds, by Warren A. Armstrong, Nutrena Mills, Inc., Minneapolis — Mr. Armstrong suggests that the quality control laboratory of a 200-ton mill, for example, have the following facilities:

1. Moisture tester for feeds and grains.

2. Screens, probably U.S. Bb. No. ⅝ in., 4, 8, 16, 30, 50, 100, 200 and others as required by special texture or screening test applications.

3. Gram balance accurate to 0.1 g.

4. Low power binocular microscope (10-45 magnification).

5. Compound microscope (10-500 magnification); a good microscope lamp, microscope slides and cover slips.

6. An American Association of Feed Microscopists Manual.

7. Urease color-method testing facilities.

8. Qualitative drug testing equipment requiring only the simplest of facilities.

9. Plus facilities for determinations of: Protein, fat, fiber, ash, calcium, phosphorus and salt.

10. Analytical facilities for trace minerals (iron, manganese, copper, cobalt and zinc); vitamins (riboflavin,

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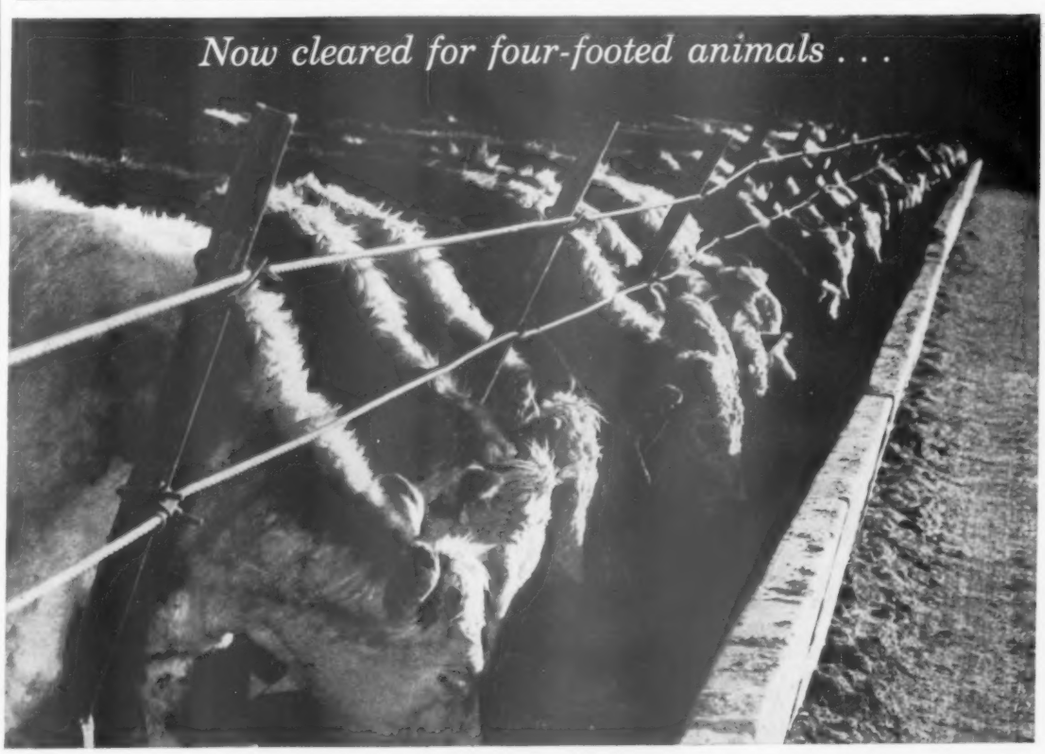

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E. E. Bartley | Wise Burroughs | J. Russell Couch

Norman L. Jacobson | J. E. Savage | A. D. Tillman

CENTENNIAL CONFERENCE SPEAKERS—Some of the widely known authorities who will participate in the portion of the Oct. 23-25 Centennial Nutrition Conference at Kansas City directly concerned with animal and poultry nutrition are pictured here. Dr. Bartley of Kansas State University will discuss the role of saliva in cattle bloat; Dr. Burroughs of Iowa State University is to speak on problems concerned with feed additives; Texas A&M's Dr. Couch will talk on unidentified growth factors; Dr. Jacobson of Iowa State will review the relationship of rumen development to carbohydrate utilization; Dr. Savage of the University of Missouri is to speak on minerals in poultry nutrition, and Dr. Tillman of Oklahoma State University is scheduled to discuss minerals in livestock nutrition and metabolism. The conference is to be conducted under the sponsorship of the Midwest Feed Manufacturers Assn. in cooperation with land-grant colleges in the association's eight-state area and in conjunction with the 100th anniversary of the land-grant college idea.

niacin, choline, vitamin A); chemical drugs, and iodine.

Facilities for 30-ton and 100-ton mills would not need to be so extensive, and for mills larger than 200 tons the laboratory might also include equipment for advanced instrumental analysis, micro-biological laboratory assays and biological assays.

The Use of Feed Microscopy in Quality Control, by James G. Pierce, Walnut Grove Products Co., Atlantic, Iowa—Mr. Pierce lists basic equipment, chemical solutions and procedures necessary for feed microscopy.

Federal Food and Drug Administration Regulations and the Feed Industry, by Dr. H. S. Wilgus, The Ray Ewing Co., Pasadena, Cal.—This section covers uses of drugs, disease control, food additives, pesticides and compliance with FDA regulations by the feed man.

Feed Ingredients Guide, by Maxwell L. Cooley, Hoffman-Taff, Inc., Springfield, Mo.—This guide, as noted by Mr. Cooley, was developed as a convenient reference for detailed information concerning most feed ingredients, including vitamins and other feed additives. The compilation covers 85 feed ingredients, 25 vitamins and other micronutrients and 48 drug products.

Information provided for each ingredient includes: A definition; its chemical composition, color, odor, texture and test weight; microscopy and miscellaneous data.

CHAPTER 10, BULK DRY MATERIALS HANDLING AND STORAGE.

Horizontal Bulk Dry Material Flow Systems, by David M. Parker, M-E-C Co., Neodesha, Kansas—The salient points covered in this chapter are the fundamental design and basic application of all horizontal mechanical conveying equipment.

In his summary, Mr. Parker says: "The most important factor governing the selection of any horizontal conveyor is knowledge of the physical characteristics of the material to be conveyed. . . . In order to select and engineer a horizontal conveyor, the feed man should obtain the following data: (1) Description of material to be handled, stating lump size or size of granulation and whether it is abrasive, corrosive, extremely hot, etc.; (2) moisture content; (3) weight per cubic foot; (4) maximum rate at which the material is to be handled; (5) method of feeding the conveyor; (6) length of conveyor, and (7) description of service, whether outdoors or indoors, continuous or intermittent."

Pneumatic Conveying Systems, by Sid Brong, M-E-C Co., Kansas City—In this section, Mr. Brong discusses the basic principles of pneumatic conveying; types of systems available to the feed industry, and their components; selection and application of pneumatic conveyors, materials and other considerations, and installation hints.

Theory of Screw Conveyors, edited by Art Stegner, Butler Manufacturing Co., Kansas City, and John H. Wessman, Grain Processing Machinery Manufacturers Assn., Kansas City—The major subheadings in this section are: Construction, inclined conveyors, capacities of horizontal conveyors, factors affecting size and pitch, power determination and limiting lengths for screw conveyors.

Bucket Elevators, by Jim McKillip, Jr., International Manufacturing Co., Cedar Falls, Iowa—Mr. McKillip describes the mechanical characteristics of bucket elevators and suggests uses in the mill.

Gravity Flow Systems, by Don F. Shimon, Butler Manufacturing Co., Kansas City—Spout design, as noted in this section by Mr. Shimon, constitutes the major concern in a gravity flow system. Emphasis is placed on: (1) Slope of spout, (2) size of spout, (3) spouting material and (4) spouting arrangements (elbows, turns, etc.).

Slope: "The slope of the spout must allow free movement of the material from a static position," Mr. Shimon says. "A measure of this is the angle of slide of the material and can be defined as the minimum angle at which material will begin to move on an inclined surface. Spouts used for more than one material must be sloped at an angle adequate to handle the worst condition. . . . Angle of slide will vary under different physical conditions of the same material, such as particle size, moisture content and texture, and conditions relative to the spout itself. . . ."

Minimum slopes recommended for handling different types of materials are: Dry grain, 35°; dry, cool pellets, 45°; dry feed ingredients and finished feeds, 60°.

Size of spouts used in a gravity flow system is regulated mostly by capacity desired, Mr. Shimon explains; however, the slope of the spout, the number of turns and elbows and characteristics of the materials affect the size also. "Spouting should be as straight and free from change in direction as possible," Mr. Shimon says.

Other tips:

—"When a turn is necessary in a spout run, the joint should be enlarged in cross sectional area to compensate for the reduction in velocity due to turbulence and tendency to pile up.

—"When grain is spouted from a hopper discharge opening or other static-material container, the transition from the normally larger opening to the spout must be made with adequate slope and shape to keep the material from bridging before entering the spout.

—"Spout areas subject to greatest wear such as corners, bends or elbows, should be either provided with an abrasive resistant liner, or a short section of spout made of abrasive resistant material such as stainless steel.

—"Interior surfaces of spouts must be free as possible of weld build-up, dents and other surface irregularities."

Flow Characteristics of Bulk Materials, by Alan Cook, Butler Manufacturing Co., Kansas City—The three primary causes of failure of flow from bulk bins, tanks and hoppers mentioned in this section are: Interlocking of particles in the discharge opening; doming (also called arching or bridging), and funneling (also called piping or ratholing).

The author believes that the two most important factors affecting material flow are compressive strength and effective angle of friction. Other primary factors are bulk density, compressibility and coefficient of friction on bin wall material. Secondary variables that influence the primary variables are moisture, temperature, static pressure, impact pressure, time under load and presence of binding agents.

Following are some of the ways flow can be aided:

—The smaller the particle size of the material, the less the flowability. Therefore, loading a bin so the fines do not concentrate at or above the opening is one step to promote gravity flow.

—Making the hopper slope steeper aids flow. But it is possible to get a hopper so steep and friction-free that material not only flows in mass but also tends to wedge.

—The so-called side discharge hopper is used frequently on round bins

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BOMB SCARE HALTS QUAKER OATS PLANT

CEDAR RAPIDS, IOWA—A bomb-scare forced the Quaker Oats Co. to suspend operation here recently and evacuate its plant. About 100 employees on the night shift were told to leave after a man telephoned the plant office and said a bomb would explode in the building within five hours. Special squads of police and firemen were called to assist in the evacuation.

Gordon DeLay, plant manager, said Quaker Oats officials were much disturbed by the prank, which cost the company several thousands of dollars in lost man-hours and production. Lester Woodward, police chief, labeled the hoax a vicious act.

for flowing difficult materials. One side of the cone is vertical and the outlet is adjacent to this wall.

—To prevent funneling, it is sometimes necessary to make the maximum outlet size almost equal to the tank diameter. This idea has been incorporated in a bin design that looks like a chisel. In a chisel-shaped hopper, material must be removed by a feeder over the entire length of the long and narrow opening at the bottom to take advantage of the antifunneling properties of the design. A tapered auger is one possibility for such a feeder. The chisel-shaped hopper can be designed to give mass flow as long as the material level does not drop below a point slightly above the top of the hopper.

—In any bin design, segregation will be minimized if a tall, small diameter configuration is used.

Bin Design, by Don F. Shimon, Butler Manufacturing Co., Kansas City—Mr. Shimon notes that, in the selection of a bin, some of the factors to be considered are: (1) Capacity of structure, (2) flow characteristics of materials stored, (3) shape of structure, (4) contamination, (5) condensation and (6) management.

"It is recognized," Mr. Shimon writes, "that the most practical and economical shaped bin is one with a greater ratio of height to cross-sectional area and construction costs per unit of storage are normally less in taller bins. The best flow characteristics are obtained, however, when bins have large cross section areas and are low in height. . . . This presents space and handling equipment problems and, therefore, bins of this shape are seldom used."

The author says center discharge hoppers are used for free flowing ingredients which will not readily arch above the outlet. "Side and corner discharge hoppers give better flow characteristics than center discharge hoppers because arches are less likely to form," Mr. Shimon says. "Corner discharge hoppers perform like side discharge hoppers. . . .

"In hoppered bins with corners, such as in a square tank, hang-up corners and valleys may be considerably reduced by placing fillets in these areas to smooth out flow. . . .

"Hoppered bins are not practical for the handling of feeds which are cohesive such as dairy feeds containing molasses. If these materials must be handled, a bin design which utilizes special unloading equipment is usually recommended."

CHAPTER 11, PACKAGED MATERIALS HANDLING AND STORAGE.

Introduction, by Robert C. Wornick, Chas. Pfizer & Co., Terre Haute, Ind.—Mr. Wornick explains that the first section of this chapter presents some of the important facts about bags and how they should be used, and that the second section "describes the results of a research project which should lead to a reduction in the cost of handling feed in textile bags."

Feed Packaging, by Frank W. Myers, Jr., St. Regis Paper Co., Kansas City—Mr. Myers discusses how packaging costs can be reduced in six major areas: (1) Proper bag specifications, (2) weighing accuracy, (3) labor saving devices, (4) settling or packing, (5) bag closures and (6) bag breakage.

Pallet-less Handling of Unit Loads of Bagged Feeds, by J. R. Fitzgerald, Textile Bag Manufacturers Assn., Chicago—Research reported in this section, which was sponsored by the Textile Bag Manufacturers Assn. and directed by the Wolf Management Engineering Co., Chicago, was responsible for the development of a material handling system for bagged feeds which makes use of a commercial lift truck but requires no pallet for the lift truck loads.

In this system, a lift truck is fitted with a special textile bag handling clamp. The two arms of this clamp are used to grip the ends of bags in the bottom layer of a stack of bags.

"To pick up a unit load (a suitable and practical load of bagged feeds to be handled and transported by lift truck without the use of a pallet or other supporting base for the load), the load is approached with the clamps open; the arms are aligned with the ends of the bottom layer of bags, and the clamp is squeezed on the bags in the bottom layer," Mr. Fitzgerald explains.

"The pressure exerted by the clamp stiffens the bottom bags enough that the bags above are firmly supported. Once the load has been secured by the clamp, the load is tilted, raised and lowered, or otherwise handled by the lift truck in the usual manner."

Advantages of this new system, as told by Mr. Fitzgerald, include these:

1. No expenditure for pallets is required.

2. The bag handling clamp also eliminates the need for paper bases, used by some feed mills when loading railroad cars.

3. The cost of loading a truck manually with bagged feeds from a pallet could be eliminated.

APPENDIX A, Common Formulas and Conversions, by Donald Brooker, department of agricultural engineering, University of Missouri. This appendix covers: Areas of plane figures, volumes of solids, weights and measures.

APPENDIX B, Densities Table, by Alan Cook, Butler Manufacturing Co., Kansas City, and **Apparent Densities of Dry Feed Ingredients,** copyrighted by Editorial Service Co., Inc., Milwaukee — These tables list the weight (in pounds) per cubic foot for many materials used in the manufacture of feed.

APPENDIX C, Screen or Sieve Specifications—In this table are recorded the U.S. Bureau of Standards sieve numbers used in all screening tests.

NEW PFIZER AWARDS—Dr. E. T. York, Jr. (center), administrator, Federal Extension Service, Washington, reviews the highlights of the program for the 46th annual meeting of the National Association of County Agricultural Agents. Looking on are Howard Campbell (left), president of the NACAA, and county agent from Mineola, N.Y., and J. J. Thompson, vice president of Chas. Pfizer & Co., Inc., New York, and general manager of the firm's agricultural division. Mr. Thompson announced to the association that Pfizer in 1962 will make two awards of $3,000 each to outstanding county agricultural agents named by state and national selection committees. The new award program will provide a chance for outstanding agents to secure additional professional improvement, including graduate studies that lead to advanced degrees, said Mr. Thompson.

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WANTED—GRAIN DRYER TO RENT FOR two months this fall. Must have capacity of 200 bu. corn per hour. Write Ad No. 7267, Feedstuffs, Minneapolis 40, Minn.

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WANTED TO BUY — ONE GOOD USED heavy duty medium capacity hammer mill, without motor. Call or write: Texas Cedar Products, Inc., P.O. Box 98, Smithville, Texas; Phone 30.

WANTED TO BUY — RICHARDSON scales, bag closing machines, other good flour, feed and grain machinery. Complete plants bought and sold. Appraisals. J. E. Hagan Mill Machinery, Box 574, Jefferson City, Mo.

WANTED TO BUY GOOD USED ALFALFA dehydrating drum and related equipment. Good used 36 inch hay mill. Write or call Warren Easland, J. W. Easland & Sons Co., Gaylord, Minn.; Belmont 72496, Belmont 72227.

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Major industrial firm needs veterinarian with poultry background to carry out field development assignments. Applicant must be adept at verbal and written communication and willing to travel. Only those supplying complete personal and professional background will be considered. All replies held in strictest confidence. Write:

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NEW ENGLAND FEED MANUFACTURER wants man experienced in production and supervision to assist superintendent and maintain quality. Give background, experience and references. Our employees know of this ad. Address Ad No. 7281, Feedstuffs, Minneapolis 40, Minn.

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W.Va. Feed Dealers Plan Oct. 12-13 Event

DAVIS, W. VA.—A discussion of what's ahead for retail feed dealers will lead off talks here Oct. 12-13 when the West Virginia Feed Dealers Assn. meets for its anual convention.

The topic, which is entitled "What's Our Future as Retail Feed Dealers?" will be handled by Robert E. Miller, director of marketing for The Beacon Milling Co., Cayuga, N.Y.

The two-day event, which will be held in the Blackwater Falls Lodge, will feature other talks dealing with rural development, credit and animal nutrition research.

"Farm Home Administration—Rural Development" is the title of a talk to be delivered the first day by J. B. Manchin, state FHA administrator for West Virginia. "Credit on the Dealer Level" will be discussed by J. B. Lauber, general manager, Wirthmore Mills, Inc., Toledo, Ohio. A social hour and banquet will climax the first day's activities.

First speaker on the second morning program will be Dr. G. C. Anderson, head, animal science department, West Virginia University, Morgantown, who will speak on "It's All New at WVU." Also slated is a panel discussion on "What's the Secret?" by a group of West Virginia feed dealers.

Anti-Grub Feeds OK Now Until Oct. 31

LEXINGTON, KY. — Medicated feeds for control of cattle grubs internally can be fed anytime now through Oct. 31, University of Kentucky entomologists are advising.

Entomologist Fred Knapp says there are two materials available commercially (Trolene FM and Rid-Ezy) which can be used. He commented that both contain trolene as the active ingredient.

Mr. Knapp described the two products:

Trolene FM comes in a 40% strength pre-mix. It is mixed with feed ingredients at the rate of 30 lb. per 1,970 lb. of feed. This combination thus makes one ton of medicated feed. It should be fed for seven consecutive days as directed on the label. Feed given will vary according to weight of the animal. Finished medicated feed should be used within four weeks.

Rid-Ezy is a 5.5% strength mineral mix. One pound of the Rid-Ezy mix should be mixed with 20 lb. of grain or protein or a mixture of these two. The completed mix should be fed for 14 consecutive days as directed by the label. Only enough feed should be mixed that can be fed in 14 days.

Benefits Cited

The medications will control cattle grubs, the larvae of the heel fly which emerge from animals' backs in the winter. Other benefits are a measure of internal parasite control, prevention of breeding by flies in animals' droppings while they are receiving medicated feed; and partial control of blood-sucking insects such as stable and horn flies during the feeding period.

Mr. Knapp cautions that the products must not be fed to lactating dairy cattle, that there is a 60-day waiting period after application before the treated animals can be slaughtered, and that treatment should not be made after Oct. 31 since poor results are obtained after that date.

POULTRY OFFICERS — Part of the officers who will guide activities of Nicholas International, newly formed world-wide poultry organization, are shown here. From left to right, they are: John Wiley, Chunky Chicks-Nichols, Ltd., Midlothian, Scotland, vice president; G. E. Coleman, Jr., Nichols Poultry Farms, Inc., Glastonbury, Conn., president; Arthur Heisdorf, Heisdorf & Nelson Farms, Inc., Kirkland, Wash., treasurer, and Dr. Hans Nagel, Lohmann & Co., Cuxhaven, West Germany, assistant secretary.

New Poultry Breeding Organization Formed

BRUNSWICK, MAINE — G. E. Coleman, Jr., president of Nichols Poultry Farm, Inc., Brunswick, has announced the formation of Nichols International, a world-wide poultry breeding organization.

Included in the group of companies are Lohmann & Co., Cuxhaven, West Germany, serving continental Europe; Chunky Chicks-Nichols, Ltd., Midlothian, Scotland, serving the British Commonwealth; Heisdorf & Nelson Farms, Inc., Kirkland, Wash., serving Asian markets, and Nichols Poultry Farm, Inc., Glastonbury, Conn., serving the U.S., Canada, Mexico, the Caribbean and Central America.

Directors of the new organization are John Wiley, vice chairman, Chunky Chicks-Nichols, Ltd.; Arthur Heisdorf, president, Heisdorf & Nelson Farms, Inc.; G. E. Coleman, Jr., president, Nichols Poultry Farm, Inc., and Heinz Lohmann, Lohmann & Co.

The newly elected officers are Mr. Coleman, president; Mr. Wiley, vice president; Mr. Lohmann, vice president; Mr. Heisdorf, treasurer; Gerald Cruea of Heisdorf & Nelson Farms, Inc., secretary, and Dr. Hans Nagel, Lohmann & Co., assistant secretary.

Amburgo Sales Event To Be Held Oct. 9-11

PHILADELPHIA — Amburgo Co. sales representatives from all over the country are expected to converge on Golden Acres, the firm's demonstration farm near New Britain, Pa., for the company's semi-annual sales meeting to be held Oct. 9-11.

Samuel M. Golden, company president, said that the program will include as principal speakers Dr. Milton Scott, professor of poultry husbandry, Cornell University, and Dr. H. Yacowitz, consultant to the Amburgo organization.

Theme of the meeting will be Amburgo's program of expansion, which in the last year has seen several new men added to the sales and service staff, a widening of the sales area and the introduction of electronic formula services to feed manufacturers, Mr. Golden said.

Mr. Golden said he will announce a new line of animal feed supplements for use by formula feed manufacturers containing highly concentrated sources of fish, whey, fermentation factors, vitamins, minerals and antibiotics. "These products were field tested at Golden Acres during the past two years and were designed on a prescription basis for a specific purpose," he said. They will be manufactured by Amburgo. Quality control will be supervised by Dr. Yacowitz.

FIRM CHANGES NAME

ADRIAN, ORE. — Officials of Adrian Feed Co.-Marsing Wheat Co. here have announced a name change for the firm. The concern will be called Norsedco, Inc. The name had previously been changed to Northland Seeds, Inc., but due to legal complications, the second name change was required. The name change follows 20 years of the firm being known as Adrian Feed. One reason for the change is that the same name will be used at both the Adrian and Marsing locations. Another is that with a new seed processing plant reaching completion at Marsing, the company will be processing alfalfa and clover at both sites, hence the old name no longer adequately described the business of the firm, officials said.

Dairy Group to Honor Dr. Carl F. Huffman

WATERLOO, IOWA—Dr. Carl F. Huffman, retired Michigan State University dairy nutritionist, will be the 1961 guest of honor Oct. 4 in Waterloo when the Dairy Shrine Club meets to honor several of the nation's outstanding dairy industry leaders.

Dr. C. F. Huffman

A portrait of Dr. Huffman will be unveiled in the club's traditional guest of honor ceremony, bringing to 16 the number of men recognized in this manner since 1949. The event, sponsored by the club since its organization in 1949 to honor great dairy leaders, is held annually in conjunction with the National Dairy Cattle Congress.

Dr. Huffman, who received his B.S. degree from Kansas State University in 1917 and earned his M.S. and Ph.D. degrees from the University of Minnesota and the University of Wisconsin respectively, joined the Michigan State staff as a research assistant in 1922. He became research assistant in 1931, was made research associate and associate professor in 1935, and research professor of dairy husbandry in 1938.

Dr. Huffman is the author or co-author of more than 125 papers dealing with many phases of dairy cattle nutrition and related deficiency diseases.

Among many honors bestowed upon Dr. Huffman was the American Feed Manufacturers Assn. award of an engraved plaque and $1,000 for outstanding research in the field of dairy production. He received the award in 1954.

Dr. Huffman was also honored in 1937 by being the first recipient of the Borden Award in dairy production by the American Dairy Science Assn. He served as president of the association in 1957.

The Oct. 4 event will climax more than 39 years of active service for Dr. Huffman as a dairy nutritionist. Although retired, his work goes on.

REJECTED AS POOR RISK, OBSERVES 100TH BIRTHDAY

HECKER, ILL. — John T. Griffin, who was rejected for a life insurance policy 75 years ago as a poor risk, observed his 100th birthday recently.

Mr. Griffin is the father of Ed Griffin, widely known feed man who is retired from Allied Mills, Inc., Chicago.

'Limestone High in Magnesium Can Cause Rickets in Poultry'

COLLEGE PARK, MD.—Some recent reports indicate that a few cases of rickets in poultry occurring in the field are brought on by feeding limestone which contains a high percentage of magnesium, says Dr. R. D. Creek, University of Maryland poultry department.

"In chicks, rickets are characterized by soft and bowing bones," states Dr. Creek. "In laying hens soft egg shells are also present. When excess magnesium is present, excitability and diarrhea are usually noticeable. The problem is more likely to occur in laying hens where extremely large amounts of limestone are added to the diet."

Dr. Creek cautioned feed manufacturers to use limestone which is low in magnesium.

Badger Feeds Gets Doughboy Franchise

MADISON, WIS. — Officials of Badger Feeds, Inc., Madison, have announced that the firm has obtained the distributorship for Doughboy "Climatized Feeds" in this area.

According to Pat Hennessey, owner of Badger feeds warehouses, a complete line of Doughboy feeds has arrived from Doughboy Industries, New Richmond, Wis., and is now available to feed retailers in the Madison area, including northern Illinois and southern Wisconsin.

Mr. Hennessey said that this is the first time that a Doughboy distributorship has been set up in southern Wisconsin.

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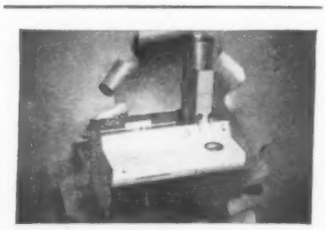

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Names in the News

HANLEY McCURDY NAMED ARBOR ACRES DIVISION MANAGER—Hanley McCurdy, formerly assistant manager of Arbor Acres northeast division, has been named manager of the Arbor Acres Queen division for the southwestern states by Henry Saglio, president of Arbor Acres Farms, Inc., Glastonbury, Conn. The promotion is effective Oct. 1.

Mr. McCurdy will be responsible for production and marketing of Queens, the new Arbor Acres straincross leghorn, at the company's southwest division headquarters in Springdale, Ark.

In his new capacity, which will be under the direction of Jerry Hinshaw, general manager, Mr. McCurdy will work with commercial egg operators in Louisiana, Texas, Arkansas, Missouri, Kansas and adjoining poultry areas.

JOHN RENSHAW JOINS MILLER & BUSHONG—John L. Renshaw has joined the sales and service staff of Miller & Bushong, Inc., Rohrerstown, Pa., according to Hendrik Wentink, sales manager.

Mr. Renshaw, who is a poultry husbandry graduate of the University of Connecticut, was formerly with Wirthmore Feeds, Inc., Waltham, Mass.

HIGHWAY EQUIPMENT APPOINTS GALE ALLEN EXECUTIVE VICE PRESIDENT—Appointment of Gale E. Allen as executive vice president of Highway Equipment Co., Cedar Rapids, Iowa, has been announced by C. H. Jordan, president.

Mr. Allen will be administratively responsible for the entire operation of the company and will continue to carry on many of the affairs of general sales manager, said Mr. Jordan.

WHITMOYER APPOINTS PAUL SNIDER WESTERN SALES MANAGER—Paul Snider, formerly a territorial representative for Whitmoyer Laboratories, Inc., Myerstown, Pa., has been promoted to western sales manager for the company, according to H. C. Suppan, sales manager.

Before his promotion, Mr. Snider served as a territory representative for Whitmoyer in Indiana. He will headquarter at Modesto, Cal.

Hanley McCurdy

John Renshaw

Gale Allen

Paul Snider

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RETIRING SPROUT-WALDRON EMPLOYEES HONORED—Retirement honors were bestowed recently on two long-time employees of Sprout, Waldron & Co., Inc., Muncy, Pa., at a banquet in Williamsport, Pa. Photo shows H. M. Soars (left), president and general manager of Sprout-Waldron, presenting gifts to J. Howard Waldron, right, and Clarence R. Lockard.

SPROUT-WALDRON HONORS J. HOWARD WALDRON AND CLARENCE LOCKARD—J. Howard Waldron and Clarence Lockard, long-time employees of Sprout, Waldron & Co., Inc., Muncy, Pa., were honored recently at a retirement banquet in Williamsport, Pa. The event drew 200 fellow workers and guests. Gifts were presented to the two men.

Mr. Waldron, son of one of the founders of the present corporation, began his service with the firm in 1905, and since that time has accumulated 37 years of service.

His first employment was in the foundry and later he did millwright work. For a few years, he owned and operated a flour mill, but returned to Sprout-Waldron in 1912 where he served as a draftsman and salesman until 1921. Mr. Waldron then joined C. A. Reed Co. in Williamsport, but returned to Sprout-Waldron in 1935 where he served in a sales capacity and for a number of years held the position of sales manager. Other positions included sales manager of the grain processing division and most recently, until his retirement, as a consultant to the same division.

Mr. Lockard served Sprout-Waldron for almost 45 years in a number of capacities. His first duties took him to the storeroom, later to the job of billing clerk, and his next assignment was in the pricing department. For a number of years he held a position in the advertising department and in 1930 was transferred to the sales department. He also worked as a sales representative.

In 1958, Mr. Lockard was made regional sales manager for the grain processing division. He was put in charge of the advertising department in 1960 and held this position until his retirement.

SWIFT & CO. ANNOUNCES MANAGERIAL SHIFTS—Swift & Co., Chicago, has announced managerial shifts at two soybean mills.

James A. Smith

Harry F. Lester will be manager at the Des Moines, Iowa, mill. He succeeds C. D. Whitaker, who will be transferred to the general oil mill department at Chicago. Mr. Lester had been manager at the Fostoria Mill since 1955.

James A. Smith was appointed manager of the Swift mill at Fostoria, Ohio.

J. J. WARREN NAMES ROBERT SIMPSON TO SOUTHERN POST—Robert Simpson has been placed in charge of sales and service in the South for J. J. Warren, Inc., North Brookfield, Mass., according to Donald W. Gray, Warren sales manager.

In his new post, Mr. Simpson will be directly associated with the firm's southern headquarters in Greenville, S.C.

HAROLD LEE NAMED TO WM. L. BAXTER ADVERTISING STAFF—Harold L. Lee has joined the Staff of Wm. L. Baxter Advertising, Inc., Minneapolis.

Mr. Lee was formerly advertising manager of the feed division for Archer-Daniels-Midland Co., Minneapolis.

PIONEER CATTLE FEEDS CLINIC—Midwest territory managers representing Hales & Hunter Co., Chicago, attended a Pioneer Cattle Feeds Clinic at Princeton, Ill., recently. Cattle feed specialists and research and development personnel schooled the group on the nutritional and husbandry aspects of feedlot operations.

Attending the event were, front row, left to right: Carl Linville, Del Wiesbrook, Ray Zirkle, Bernard Cole, Dave Geraghty, Jim Williams, T. North Pile and Tom Kubajak (behind Pile). Second row, left to right: Tom Garrison, Art Hylton, Jr., Charles Calhoun, Tom Schliesman, Bob Perry, Dave Ashbrook, B. Edwards, Roy Wiesbrock, Joseph H. King, sales administrative assistant; J. D. Fowler, regional sales manager.

Third row, left to right: E. E. Hartwick, district sales manager; Louis Ulferts, J. Phil Doolin, Hugh McClain, Martin Jipping, Harold Short, Norm Witherspoon, Paul Gerstner and Del Ebersole. Fourth row, left to right: Ed Ender, district sales manager; Brian Grant, assistant manager, hog and cattle feeds department; J. S. McGuire, district sales manager; Claude Biles, Jim Lambright, Sid Hatfield, Eugene Kerr, supervisor, chemical laboratories; Dr. D. Shroder, research and development; Jerrold Stark, regional account sales manager; D. L. W. Price, D.V.M., director of research and development; James F. Spurrier, manager, hog and cattle feeds department.

BROILERS

(Continued from page 1)

purchase of 6 to 8 million of the breeder hens. He requested the plan be instituted in a letter he wrote to Sec. Orville Freeman last Aug. 17. The following day he repeated the suggestion in a speech to the Senate.

However, the USDA did make another contribution to the industry this week by purchasing another 300,000 lb. for the school lunch program. Prices paid ranged from 28.50¢ to 29.89¢, with the total amount spent amounting to $88,000. Shipment dates were specified as Oct. 12 through Oct. 27. This brings the total purchases to 16,260,000 lb. since last July.

This week's market hung fairly steady in the 12¢ range. The undertone was steady with a quiet demand for ready-to-cooks. Average weights through most of the week were generally small.

The feeling is increasing that prices are going to hinge at somewhere between 12 and 14¢ until the first of the year at least.

Meanwhile, a definite wait-and-see attitude is developing inasmuch as most students of the market feel nothing but the old law of supply and demand can have any bearing on the situation.

Marketing Order Views

Also noticeable this week has been a crystallizing of opinion regarding marketing orders. It is becoming quite apparent that there is considerable opposition to the "Georgia plan." Alabama has let it be known that it is adopting a wait and see attitude. Arkansas has said it is against controls, and South Carolina likewise has expressed opposition. Significantly Delmarva let it be known it is not in accord with the Georgians.

Directors of the Southeastern Poultry & Egg Assn., meeting in Atlanta, decided likewise to await a "more unified opinion."

Meeting in Atlanta last weekend, the directors heard Dr. James Ralph, assistant USDA secretary. He was invited to appear before the meeting to explain the department's ideas on the broiler problem.

He said Secretary Freeman may form a national poultry commodity committee at some time in the future to make a further study. This committee, he said, was suggested by poultry leaders in Texas, California, Virginia and other states. However, he said, the committee's appointment would not mean the development of a marketing order. He also said the committee might not even be appointed, depending upon reaction from the industry.

MINORITY

(Continued from page 1)

The opinions on the poultry situation were evolved in what must be accurately described as a harmonious "town hall" type of meeting without acrimony or heat, where individuals figuratively let their hair down to discuss the current dilemma of the feed industry and the distressed condition of the broiler and other segments of the poultry industry.

Federal Feed Standards

Also of concern to the feed men was a recent statement on feeds by a front office representative of the Secretary of Agriculture. This was the statement made before the House Small Business sub-committee by Byron (Barney) Allen, special assistant to the secretary. Mr. Allen told the sub-committee, among other things, that attention may be given to the possibility of a national feed control order which also would set a common pattern for all states in imposing feed controls. The possibility of "federal standards" on feed was suggested. (Feedstuffs, Sept. 16).

At the same time, USDA officials, after reading the recent Feedstuffs report on the statement by Mr. Allen, contended that Mr Allen did not mean what his statment appeared to say as read by any literate citizen.

The Allen statement, when coupled with the supply-management control philosophy in USDA, can be described as indicating not less than a reaching out for power and control over the feed manufacturing industry. Possibly a central office here would try, through supply-management control and price manipulation through sale of farm surpluses, to impose a rein on formulas for animal and poultry feeding — all of which would be cloaked in the virtuous cloak of what is "good for the farmer."

Poultry Problem

Meanwhile, it is hardly news that an AFMA directors' meeting would be intent on poultry industry problems. However, this heated subject is said not to have acted as a heat inducer. The meeting was described as harmonious, and it was the consensus that there should be no polling of the directors on the issue of marketing orders for poultry. It was felt that it was more appropriate that the industry undertake a searching examination of the regional position of manufacturers and that a free exchange of views as they are developed should be encouraged. Again, at some later date, there may be a way for a plebiscite before the next session of Congress, when proposed poultry controls may be one of the first orders of business.

In regard to the Allen testimony, the AFMA directors were deeply disturbed, and it must be expected that the organization will gear its forces to resent the industry side of the Allen attack, which described some of the industry promotion activities as "gimmicks."

Sources within the directorate told this reporter that normal but important aspects of organizational business also were discussed at the meeting.

DEALERS

(Continued from page 1)

ern Grain & Feed Assn., Midwest Feed Manufacturers Assn., and Iowa Veterinary Medical Assn.

Mr. Schafenecker pointed out that a "bag of feed" must be incorporated in a feeding program, requiring nutritional service, and that the livestock producer must know how to use the product, requiring service-selling.

Performing these and many other types of services is the retail feed dealer or his equivalent. The Kent sales manager said that in order to perform these services, this dealer must be strong.

Mr. Schafenecker indicated that a nutritional program for the dealer is just as important as the formulation of livestock rations. His formula for a strong dealer followed along the seven nutritional elements of protein, carbohydrates, fats, vitamins, minerals, trace elements and additives.

Strong Dealer Formula

The seven essential ingredients for strong dealers, as cited by the Kent sales manager, are: The muscle-building protein which makes a business strong, sound finance; the carbohydrates providing energy for serving customers, vigorous inside and outside service-selling; the fats in this formula, facilities for customer service as related to sound finance and developed through long-range planning; the vitamins in this ration, trained, enthusiastic employees, furnishing the vigor and vitality necessary for a successful business; minerals, which serve in building teeth in the feed formula, represent the "bite" in this program brought about by consistent advertising and promotion; the trace elements of this business success formula, adequate bookkeeping and accounting enabling the manager to control the many phases of his business, and the additives, a sound credit policy.

Mr. Schafenecker likened the business manager or owner to a quality control supervisor who is responsible for seeing that each ingredient is present in the right proportion to insure the proper performance of the product.

Caution on Credit

Cautioning the feed men on their credit policies, the Kent executive cited a Dun & Bradstreet study on the diminishing value of open accounts. He said that at the end of 30 days, $1 on the books still has a value of $1. But, from there on the value drops as follows: 60 days, 90¢; six months, 67¢; one year, 45¢; two years, 23¢; three years, 15¢, and five years, 1¢. Mr. Schafenecker said most feed men cannot afford to give away even 10%, the reduction in value of an open account at the end of 60 days.

Public Relations Job

Turning from comments on the individual success of feed dealers to the entire industry, Mr. Schafenecker said that judging from the charges made against the feed industry by Byron Allen, special assistant to the secretary of agriculture, when he suggested federal feed standards (page 1, Sept. 16 Feedstuffs), the feed industry has some public relations work to do. He said there are a good many false impressions of what the feed industry is trying to accomplish through ingredient substitutions.

The Kent executive said that nutrition is the first and foremost concern of feed companies. He said the feed industry would not now be the 12th largest industry in the country if it had not been concerned with nutritional value of the feeds manufactured.

He cautioned feed men to watch the claims they make for their feeds. But, he said, the feed industry is not the only offender when it comes to making claims for its product and cited a number of other products which had not lived up to the claims made by the manufacturer.

Once again, commenting on the rapid growth of the industry, he reminded feed men that "you can't push something which is going faster than you are."

Pet Food Group Elects Officers, Directors

CHICAGO — Three new officers and as many new directors were elected at the Pet Food Institute annual convention in Chicago Sept. 18-19.

Newly elected officers are Harry Wissler, National Biscuit Co., New York, secretary-treasurer; George Laimbeer, General Foods Corp., New York, chairman, and James P. McFarland, General Mills, Inc., Minneapolis, vice chairman. Henry A. Bucklin, Smith, Bucklin & Associates, will continue as president.

Elected to the group's board of directors were: Loren Morris, Central Nebraska Packing Co., North Platte, Neb.; Robert B. Strom, Armour & Co., Chicago, and John Doyle, Doyle, Inc., Chicago.

Carry-over board members include: Norman Berkness, Carnation Co., Los Angeles; Clyde P. Kassens, Perk Foods Co., Chicago; Mr. McFarland, and R. Parker Long, the Quaker Oats Co., Chicago.

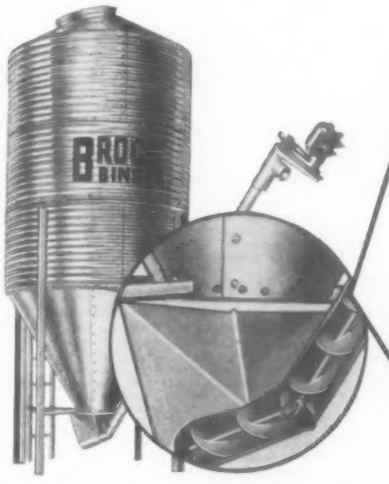
TOP OF THE HOPPER

(Continued from page 2)

rules trying to figure out what to do with the 850,000 tons of bean meal produced from processing 400 million pounds of soy oil for foreign donation, bean meal is likely to become harder to sell at $40 ton than at $15 higher.

"But don't worry, some arm-chair agriculturist from the environs of the Potomac Basin will come up with a solution. He'll have the government take the meal off the processors' hands and ship it to some distant South Sea island as food for the starving sea fowl. The resulting step up in the production of guano there will in turn be shipped to the U.S. for fertilizer so that still more bushels of soybeans can be grown per acre, creating still more problems for our governmental planners to 'solve.'

"Note: Don't let anyone in Washington read this. Someone will surely take the idea seriously."



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The auger and the new Brock "All-Out" Bottom form a single unit with no reduction in bin capacity! Now, the large 4" auger enters the *entire* bin bottom. This greater penetration allows the auger to reach *all* the feed. Agitation is increased; and bridging, jamming and sticking are virtually eliminated.

Brock Bulk Feed Bins with the new "All-Out" Bottom are available in both side-draw (4- to 8½-ton sizes) and center-draw (3- to 7½-ton sizes) models in 6' and 9' diameters. Rugged weatherseal construction features heavy-guage galvanized steel; girder-like angle-iron legs with steel bracing, and caulked seams and bolts with Neoprene washers. Easy-to-reach, *slanting* 22" fill-hole permits filling the entire bin. There is no better bulk feed bin made! *Write for literature and prices today.*

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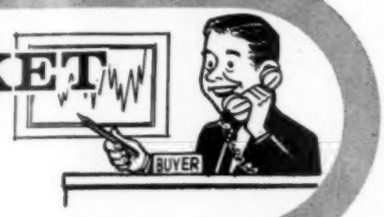

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bulk, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

ALFALFA MEAL

Kansas City: Demand fair; trend steady; supply adequate; 17% dehydrated alfalfa, 100,000 A pellets $40@42, reground pellets $41@43; 18% dehydrated alfalfa, 125,000 A pellets $42@45, reground pellets $44@46; 20% dehydrated alfalfa, 150,000 A pellets $45@50, reground pellets $49@51; all unchanged.

Boston: Demand and supply steady; trend steady; dehydrated, 17% $50@51, unchanged to $1 higher; suncured, 13% $48, sacked, unchanged.

Memphis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $46, unchanged; reground pellets $47.60, unchanged.

Ft. Worth: Demand fair; trend steady; supply sufficient; sacked; dehydrated, 17% 100,000 A $51, rail or truck, up $1 on rail; suncured, 13% ¼-in. grind, No. 1 $43, truck, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $44@48, unchanged.

St. Louis: Demand fair; trend firmer; supply ample; dehydrated, 17% protein, 100,000 units of vitamin A, pellets $40.50, unchanged.

Los Angeles: Demand and trend steady; supply adequate; dehydrated meal, 17% protein, 100,000 A $50@51; dehydrated pellet meal, 17% protein, 100,000 A $52@54; suncured meal, 15% protein $41@42; suncured crumbles, 15% protein $43@44; all unchanged.

Portland: Demand fair; supply adequate; trend unchanged; 15% suncured $39@40, sacked; 20% dehydrated pellet meal $69, sacked.

Chicago: Demand and supply fair; trend steady; dehydrated, 17% protein, 100,000 units vitamin A $44.10.

Buffalo: Demand and supply fair; trend steady; $56.10, sacked, Boston, unchanged.

Minneapolis: 17% dehydrated, 100,000 units vitamin A reground pellets, up to $47; oiled reground up to $48; up $1.

Seattle: Demand fair; trend steady; supply ample; suncured, 15% protein $39, Seattle; dehydrated, 150,000 A units $67, Seattle; both unchanged.

Denver: Demand fair; trend steady; supply ample; dehydrated $42, unchanged.

ANIMAL FAT (STABILIZED)

Ft. Worth: Demand fair; trend lower; supply moderate; prime tallow, tank cars 5½¢ lb., drums 7@7½¢ lb., f.o.b. north Texas packing plants with returnable drums, unchanged.

St. Louis: Demand slow; trend easy; supply ample; yellow grease 5¢ lb., delivered, tank trucks or cars, down ⅛¢.

Boston: Demand slow; trend easier; supply ample; tallow 5¼¢ lb., off ¼@⅜¢; yellow grease 5¢ lb., off ¼@⅜¢ lb.

Memphis: Demand slow; trend barely steady; supply adequate; yellow grease 5⅛¢ lb.; prime tallow 5⅜¢ lb.

Los Angeles: Demand good; trend steady; supply ample, 5⅜¢ lb., unchanged.

Chicago: Demand improved; trend 12½@25¢ up; supply adequate; bleachable fancy tallow $6.12½ cwt., yellow grease $5.62½ cwt., tank truck or carlot.

St. Paul: Demand good; supplies adequate; trend firmer; off ⅛¢ to 5⅝¢ lb., f.o.b. producer's plant.

Atlanta: Demand fair; trend weak; supply ample; 5⅛¢ lb., f.o.b. Alabama and Georgia production points.

BARLEY FEED

Boston: Demand and supply light; trend steady; $45.50, unchanged.

Los Angeles: Demand slow; trend weaker; supply adequate; $2.60 cwt., down 2½¢.

Chicago: Demand and supply fair; trend unchanged; $35, sacked.

Baltimore: Demand and supply fair; trend firm; $45.50, sacked.

Seattle: Demand good; trend firm; supply fair; $48, truck lots, unchanged.

Denver: Demand fair; trend steady; supply short; $2.50, sacked; $2.25, bulk, unchanged.

BLOOD MEAL

Los Angeles: Demand good; trend steady; supply adequate; $5.25@5.50 a unit of ammonia, sacked, unchanged.

Chicago: Demand good; trend steady; supply fair; 80% protein $132.50, sacked.

BONE MEAL (STEAMED)

Boston: Demand and supply steady; trend steady; $105, unchanged.

Ft. Worth: Demand improving; trend steady; supply sufficient; domestic $100, sacked, f.o.b. Ft. Worth, unchanged.

Cincinnati: Demand fair; trend steady; supply ample; $100, sacked, Cincinnati, unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; imported $78.50, 20 ton lots, sacked, unchanged.

Chicago: Demand fair; trend steady; supply ample; $97.50, sacked.

Buffalo: Demand and trend steady; supply fair; $105, sacked, f.o.b. Buffalo, unchanged.

Seattle: Demand fair; trend steady; supply good; $92, f.o.b. car Seattle, sacked, unchanged.

Denver: Demand slow; trend steady; supply ample; $108, unchanged.

BREWERS DRIED GRAINS

Boston: Demand good; trend firmer; supply fair; 26% $47@49, unchanged to $2 higher.

St. Louis: Demand fair; trend firm; supply limited; 26% protein $40, up $2.

Cincinnati: Demand poor; trend steady; supply adequate; $46, down $1.

Ft. Worth: Demand slow; trend stronger; supply sufficient; 26% protein $54.50, sacked, October, up $1.50.

Los Angeles: Demand and trend steady; supply adequate; $50, unchanged.

Chicago: Demand slow; trend $1.50 higher; supply ample; 26% protein $37.

Buffalo: Demand and supply fair; trend higher; $49, Boston, up $2.

BREWERS DRIED YEAST

Boston: Demand and supply light; trend steady; 11¢ lb., unchanged.

Cincinnati: 9@10¢ lb., sacked, unchanged.

Los Angeles: Demand good; trend steady; supply adequate; 10¢ lb., 5 ton lots, sacked; 11¢ lb., 1 ton lots, sacked; 12¢ lb., less than ton lots, sacked; all unchanged.

St. Louis: Demand fair; trend firm; supply ample; 9½@10¢ lb., carlots, sacked; 10½¢ lb., ton lots; 11½¢ lb., less than ton lots.

Chicago: Demand fair; trend steady; supply ample; 9½@10¢ lb., carlots, sacked; 9¾@12½¢ lb., l.c.l.

Buffalo: Demand good; trend steady; supply only fair; $8.95 cwt., f.o.b. Buffalo, unchanged.

Seattle: Demand slow; trend steady; supply ample; $12 cwt., sacked.

CALCIUM CARBONATE

Ft. Worth: Demand normal; trend steady; supply sufficient; $7.50, sacked, f.o.b. north Texas, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $7@7.50 cwt., unchanged.

Los Angeles: Demand normal; supply adequate; trend steady; flour $9.85, 20 ton cars, sacked; meal $10.20, 20 ton cars, sacked; both unchanged.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse.

Chicago: Demand fair; trend steady; supply ample; fine grind, plain, 100 lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.05; granular grind $1 premium.

Minneapolis: Fine grind, 50 lb. bags $13.75; 100 lb. bags $13; bulk, boxcar $11.50; bulk, hopper $11; coarse grind $1 premium, delivered Minneapolis.

Denver: Demand fair; trend steady; supply ample; $12.50, carload, unchanged.

COCONUT OIL MEAL

Los Angeles: Demand slow; trend steady; supply adequate; copra cake $65, unchanged.

Portland: Demand slow; supply adequate; trend unchanged; 20% solvent $65.20.

Seattle: Demand fair; trend steady; supply ample; solvent type $71, f.o.b. car Seattle, sacked, unchanged.

CONDENSED FISH SOLUBLES

Boston: Demand active; trend firm; supply nil; $55, nominal, up $10.

Los Angeles: Demand fair; trend steady; supply tight; 3½¢ lb., unchanged.

Denver: Demand fair; trend steady; supply ample; 3¢ lb., f.o.b. West Coast, unchanged.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are bulk basis, sacked basis $6 more)

Minneapolis: Feed $41.70, meal $72.70.
Atlanta: Feed $45.10, meal $76.10.
Birmingham: Feed $42.90, meal $73.90.
Boston: Feed $46.60, meal $77.60.
Chicago: Feed $35, meal $66.
Cleveland: Feed $43, meal $74
Denver: Feed $45.30, meal $76.30.
Ft. Worth: Feed $45.80, meal $74.80.
Indianapolis: Feed $40.25, meal $71.25.
Kansas City: Feed $35, meal $66.
Louisville: Feed $41.55, meal $72.55.
New York: Feed $46.20, meal $77.20.
Norfolk: Feed $45.60, meal $76.60.
Philadelphia: Feed $45.80, meal $76.80.
St. Louis: Feed $35, meal $66.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $42, unchanged.

Seattle: Demand good; trend easy; supply ample; feed $52, car, unchanged.

COTTONSEED OIL MEAL

Ft. Worth: Demand good; trend steady; supply light on old process, increasing on solvent; 41% old process $60@61, f.o.b. mills Ft. Worth, unchanged; loose hulls $12@13; solvent $57.50.

Memphis: Demand fair; trend steady to lower; supply ample; prime 41% protein, old process $52, down $1.50; new process, 41% protein $51, down $1.50.

Cincinnati: Demand poor; trend steady; supply adequate; $59, down 60¢.

Kansas City: Demand slow; trend steady; supply ample; 41% solvent process $57.70, down $2; 41% old process $59.20, down $1.50.

St. Louis: Demand good; trend easy; supply adequate; 41% solvent process $55.50, delivered, down $1.25.

Los Angeles: Demand very slow; trend easier; supply plentiful; $58, unchanged to $1 lower.

Portland: Demand dull; trend lower; supply adequate; 41% solvent $67.20.

Buffalo: Demand fair to poor; trend steady to lower; supply fair; $74.20, sacked, Boston, off $3.

Atlanta: Demand good; trend steady; supply limited; 41% $58 South Carolina, $58 Georgia, $56 north Alabama, $52 Mississippi and Tennessee producing mills.

Seattle: Demand good; trend steady; supply ample; 41% expeller $69, f.o.b. car Seattle, unchanged.

Denver: Demand fair; trend steady; supply scarce; $61, down $3.

CURACAO PHOSPHATE

New York: Minimum 14% phosphorus $43.50 sacked, $40.50 bulk, f.o.b. New Orleans, Jacksonville and Philadelphia.

DEFLUORINATED PHOSPHATE

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload $61.25, sacked, 100 lb. multiwall bags, bulk $58.25; truck load $62, sacked, in 100 lb. multiwall bags, bulk $69, f.o.b. Coronet, Fla.

Tupelo, Miss.: Minimum phosphorus 14%, minimum calcium 28%, maximum fluorine .14% $52, f.o.b. Tupelo in 100 lb. multiwall bags, $49 bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum 36%, maximum fluorine .18% $66 (or $3.67 per unit of P), f.o.b. Wales in 100 lb. multiwall bags, $3 less in bulk.

Butte, Mont.: Minimum phosphorus 18%, minimum calcium 32%, maximum calcium 36%, minimum fluorine .18% $81 (or $4.50 per unit of P), f.o.b. Butte, 100 lb. multiwall bags; bulk $78; truck lots of less than 10 tons $10 more, bagged or bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $69.35 net ton, f.o.b. Houston, 100 lb. multiwall bags; $66.35 bulk ($3.65 per unit of P).

Port Arthur, Texas: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; guaranteed uniform analysis; carload and truck load $65.75, sacked, 100 lb. multiwall bags; bulk $62.75, f.o.b. Port Arthur.

Cincinnati: 18% phosphorus, carlots $74.30, ton lots $84.30; 14% phosphorus, carlots $62.50, ton lots $72.50; Cincinnati, unchanged.

Ft. Worth: Demand normal; trend steady; supply adequate; minimum 18½% phosphorus, maximum 31% calcium, maximum .18% fluorine, $76.25, unchanged.

DICALCIUM PHOSPHATE

Chicago: Bulk, carlots and truck loads, 18½% phosphate $78 and 21% phosphate $89; packed in 100 lb. papers, 10 tons or more, 18½% phosphate $81 and 21% $92; lesser quantities, 18½% phosphate $91 and 21% $102; above prices per ton, f.o.b. Chicago Heights, Ill., or Nashville, Tenn.

Bonnie, Fla.: Minimum phosphorus 18½%, granular, $81 (or $4.38 unit of P), freight equalized from nearest producing point, carload basis; bulk carloads $3 less; in truck loads of less than 10 tons, $10 more. Western slope prices, for delivery at established railroad stations and by truck at regular feed mixing plants: California, Arizona, Nevada and Utah, $99.80; Washington, Oregon, Montana and Idaho, $107.15; bulk carloads $3 less; truck loads less than 10 tons, $10 more.

Columbia, Tenn.: Minimum phosphorus 18.5%, minimum calcium 24% $81, f.o.b. Columbia, in 100 lb. multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Texas City, Texas: Minimum phosphorus 18.5%, minimum calcium 20%, maximum calcium 23%, maximum fluorine .12%; carload and truck load $75.50, sacked, in 100 lb. multiwall bags, bulk $72.50, f.o.b. Texas City.

Treaton, Mich.: 18½% phosphorus and 23% calcium, bulk boxcar/hopper car $78; bagged $81; 21% phosphorus product production discontinued.

Buffalo: Demand and supply good; trend steady; $82.90, sacked, Boston, unchanged.

Seattle: Demand good; trend steady; supply limited; $91, ex-dock Seattle, sacked, unchanged.

Denver: Demand fair; trend steady; supply ample; $88.50, carloads, unchanged.

Cincinnati: 18½% phosphorus $88.80, bagged in carloads; $98.70, bagged in ton lots, f.o.b. Cincinnati; $81, f.o.b. production points, unchanged.

Ft. Worth: Demand good; trend steady; supply adequate; $81.50, sacked, unchanged.

Los Angeles: Demand and trend steady; supply adequate; 18½% phosphorus $95.10, sacked, unchanged.

DISTILLERS DRIED GRAINS

Boston: Demand fair; trend steady; supply adequate; $53@54, unchanged to $1 lower.

Cincinnati: Demand poor; trend steady; supply adequate; $50, up $1.

Buffalo: Demand fair to good; trend steady; supply fair; $54, Boston, unchanged.

Seattle: Demand good; trend firm; none available; $71, delivered truck lots, sacked, unchanged.

DRIED BEET PULP

Boston: Demand fair; trend unsettled; supply spotty; immediate $58.35, up $1.35; last quarter shipments $54@54.50, unchanged.

Los Angeles: Demand fair; trend firmer; supply adequate; $47, milk shed area for October, up $1.

Seattle: Demand fair; trend steady; supply ample; $48, delivered carlots, sacked, unchanged.

Portland: Demand fair; trend steady; supply adequate; $47.58, sacked, new crop basis.

Buffalo: Demand and supply fair; trend steady; $55, Boston, unchanged.

Denver: Demand light; trend steady; supply short; $60, unchanged.

Atlanta: Demand fair; trend steady; supply good; $58.01, sacked, delivered.

DRIED BUTTERMILK

Boston: Demand and supply light; trend steady; 14¢ lb., unchanged.

Los Angeles: Demand fair; trend firmer; supply light; 14@14¼¢ lb., sacked, ¼¢ higher.

Chicago: Demand slow; trend firm; supply fair; medium acid $9.75@10.25 cwt., sacked; sweet cream $9.75@10.25 cwt., sacked.

Buffalo: Demand little firmer; trend steady; supply adequate; $10.60 cwt., f.o.b. Buffalo, unchanged.

DRIED CITRUS PULP

Boston: Demand good; trend firm; supply fair; $53.50, up 25¢.

Los Angeles: Demand and trend steady; supply limited; orange pulp $43, lemon pulp $40@41, both unchanged.

Buffalo: Demand fair to poor; trend steady; supply adequate; $35, sacked, f.o.b. Florida points.

Atlanta: Demand fair; trend weaker; supply good; pulp $33@35, sacked; meal $30@32.50, sacked; both f.o.b. Florida.

DRIED SKIM MILK

Boston: Demand and supply steady; trend steady; 13½¢ lb., unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 12@13¢ lb., sacked, unchanged.

Ft. Worth: Demand slow; trend steady; supply sufficient; $16.50 cwt., sacked, unchanged.

Los Angeles: Demand slow; trend steady; supply adequate; 14¢ lb., less than ton lots, sacked; 13¾¢ lb., ton lots, sacked; both unchanged.

Buffalo: Demand and trend steady; supply adequate; spray $11.60 cwt., f.o.b. Buffalo, unchanged.

Chicago: Demand quiet; trend firm; supply ample; $11.50 cwt., sacked.

Minneapolis: Demand good; supplies very tight; price steady at $13.25 cwt.

DRIED WHEY

Kansas City: Demand fair; trend steady; supply ample; $4.50 cwt., sacked, unchanged.

Boston: Demand light; trend steady; supply adequate; $4.85 cwt., unchanged.

Ft. Worth: Demand slow; trend steady; supply adequate; standard $4.75, sacked, truck or rail, delivered Ft. Worth; small lots $5.25, f.o.b. warehouse Ft. Worth, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $5.75 cwt., sacked, unchanged.

Los Angeles: Demand fair; trend steady; supply adequate; $5.10 cwt., carloads, sacked; $5.25 cwt., l.c.l., sacked; both unchanged.

Minneapolis: Demand good; supply tight; price unchanged at $4.75 cwt., f.o.b. shipping points.

Chicago: Demand quiet; trend firm; supply fair; $4.75 cwt., sacked.

Seattle: Demand steady; trend easy; supply good; $5.70 cwt., ex-warehouse, l.c.l., unchanged.

Denver: Demand light; trend steady; supply ample; $5.25 cwt., truck load, unchanged.

FEATHER MEAL (HYDROLYZED)

Boston: Demand slow; trend steady; supply light; $98.50, nominal, unchanged.

Memphis: Demand slow; trend barely steady; supply adequate; 85% meal $90.

Ft. Worth: Demand moderate; trend lower; supply increasing; 85% protein $87@90, delivered Ft. Worth, down $5.

Los Angeles: Demand excellent; trend steady; supply adequate; $1 a unit of protein, sacked, unchanged.

Atlanta: Demand good; trend steady; supply ample; $89, f.o.b. Georgia and Alabama producing points.

FISH MEAL

Boston: Demand active; trend firm; supply nil; nominal, white $117, red $112, both nominally unchanged.

Ft. Worth: Demand good; trend steady; supply limited; sacked; 65% protein Peruvian $124; 60% new crop menhaden $127.50, both unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; $113.10, unchanged.

Los Angeles: Demand slow; trend steady; supply not too plentiful; local production, 60% protein $1.82½@1.90 a unit, unchanged.

Chicago: Demand fair; supply light; trend $1 higher; menhaden, East Coast $117@119, Gulf $117@119; scrap, East Coast $113@115 and Gulf $113@115; Canadian herring $1.70 a unit of protein.

Portland: Demand fair; trend lower; supply adequate; $1.90 a protein unit, sacked.

Buffalo: Demand light; trend steady; supply limited; 60% protein menhaden $132.50, f.o.b. Buffalo, unchanged.

Minneapolis: Demand slow; supply improved somewhat; Canadian herring off 5¢ to $1.50 a unit, f.o.b. West Coast, subject to production; 60% West Coast blended off $2 to $140.

Seattle: Demand good; trend steady; supply fair; $1.90 a unit protein, f.o.b. truck, Vancouver, B.C., sacked (Canadian production), unchanged.

Atlanta: Demand fair; trend steady; supply short; 60% menhaden $116, sacked, f.o.b. Carolina Coast.

Denver: Demand good; trend steady; supply tight; $1.85 a protein unit, f.o.b. West Coast, unchanged.

HOMINY FEED

Memphis: Demand poor; trend weak; supply ample; white $40.30, yellow $40.30.

Kansas City: Demand weaker; trend slow; supply ample; white $32, yellow $33, unchanged.

Boston: Demand good; trend steadier; supply adequate; $50, up $2.

Cincinnati: Demand fair; trend steady;

(Turn to QUOTES, page 100)

Major Markets Roundup

Soybean Oil Meal Continues Price Slide

Soybean oil meal continued its price decline this week. Prices were down $1 to $7 around the nation. Millfeeds were stronger, with the price situation in Buffalo flour mills the major influencing factor.

Most protein ingredients were on the lower side in sympathy with soybean meal.

Alfalfa processors announced a $2 increase in meal prices at the end of the week. The cold wave and resultant end of the processing season in many areas were given as the reasons for the price hike.

There seemed to be an air of caution about the ingredient market. Many buyers were still purchasing only on an as-needed basis, many reportedly feeling that soybean meal would decline further.

East

BOSTON: Labor difficulties in Buffalo tightened the supply of wheat millfeed in the market.

Bran responded with a $4.50 advance while middlings gained $4.

On the other hand soybean meal experienced continued weakness and values fell further with 44% declining $4, while the 50% slumped $6. Other feeds were more or less stable with buying interest limited to actual requirements. Fish meal and solubles were actually removed from the market and quotations were largely nominal.

BUFFALO: Millfeed sales were snagged by strikes or strike-caused shortages of supplies. Some consumers went west for their supplies, but others had stockpiled in anticipation of labor strife here.

The ingredient market was slow and thoroughly scrambled. Cash corn was off 1 to 1½¢; barley was hard to find and up 3 to 4¢. Animal tallow weakened under the pressure of soybean oil meal and touched a long-time low of 5¾¢ lb. Soybean oil meal declined $1.50 and cottonseed oil meal dropped $3, but linseed oil meal bucked the trend with a 50¢ gain.

Hominy rose $1 and brewers' grains advanced $2.

Midwest

CINCINNATI: Demand for feed ingredients remained firm this past week with supplies adequate.

In price adjustments, the biggest drop was in linseed oil meal by $6. It was followed by bone scraps down by $3.50, screenings off $2.50 and soybean oil meal down by $2 to $3. Also lower were brewers dried grains, by $1; cottonseed oil meal, 60¢, and molasses, ¼¢.

Millfeeds were in fair demand with prices up $3 for middlings and $2.50 for bran. Distillers' dried grains advanced $1.

CHICAGO: Cash soybean meal prices slipped still more this week. On Sept. 27, 44% unrestricted was recorded at $52 ton and Eastern Trunk Line was billed at $47, the lowest prices of the year. Prices for 50% protein, at $57 and $52.50, respectively, for unrestricted and ETL billing, equalled the calendar year lows recorded Jan. 18.

Meal futures at Chicago didn't show quite the easiness that was demonstrated by the cash commodity.

ST. LOUIS: An active replacement demand prevailed for feed ingredients but there were no reports of any sizeable forward business. Price changes were irregular with animal and vegetable protein ingredients along with most grains on the downside. Brewers grains and millfeeds moved up.

Soybean meal staged a little rally from its early low. That was attributed to rainy weather conditions. With clearing weather an easy undertone returned, leaving quotations with a net loss of $1 for the week. Meat scraps were down another $5.50 along with gluten meal off $2 and cottonseed meal off $1.25. It was apparent that buyers were holding back in expectation of still lower prices ahead.

Brewers grains firmed and were quoted up to $40. One large producer was reportedly sold out for October shipment but other producers were still in the market. Millfeeds gained up to $2 with the upturn attributed to a strike-caused loss of production. Offerings, however, appeared to be in line with demand.

South

ATLANTA: Excellent weather is enabling farmers to increase the harvesting of corn and good supplies of corn are offered from $1.05 f.o.b. to $1.20 to $1.25, delivered, depending upon location.

Many cottonseed oil mills in the Mississippi Valley have reduced prices on cottonseed meal as much as $1 per ton to get immediate shipment, but are asking higher prices for October forward shipments.

Most of the major feed ingredient buyers continue to buy their requirements on an as-needed basis and are not inclined to take a position on their proteins at this time until they see what is going to happen when most of the southern soybean mills are in production, and what bearing it will have on cottonseed meal.

With good supplies of ground cobs and shucks being offered at $11 per ton, sacked, f.o.b. South Georgia, it is beginning to have its effect on the asking prices of cottonseed hulls. Many of the oil mills have reduced their prices for October-November shipment, with sales being made at $13, sacked, f.o.b. the mills.

MEMPHIS: Mixed feed business was slow on the Memphis market last week, and this was reflected in a fair to poor demand for ingredients.

Buyer attitude in the Memphis territory appeared similar to that of buyers in most other sections of the country. They were buying on a week-to-week basis, filling requirements. The buyers expected most animal and poultry products to move lower during October, when meeting severe competition from vegetable proteins.

With additional plants beginning operations, cottonseed oil meal prices moved downward $1.50 per ton. Most buying interest was for the nearby positions, with reluctance shown to book ahead at this time.

Memphis production of soybean oil meal was fairly well sold up until the week of Oct. 2. Local mills will resume full crush that week as some early soybeans have moved into Memphis. The price basis for immediate shipment is fairly firm due to limited offerings. Weakness is felt for October, however.

Some feeling in the trade is that soybean oil meal is not yet at a price attractive for forward bookings.

The millfeed market was featured by a sudden upturn due to strike-caused mill shutdowns in the East.

Oilseed meal futures prices were mixed on the Memphis Board of Trade. Unrestricted soybean oil meal closed Sept. 26 25¢ lower to 25¢ higher than a week ago and bulk solvent cottonseed oil meal was unchanged to $1.50 lower.

Trading volume was limited to 100 tons of unrestricted soybean oil meal.

Southwest

KANSAS CITY: Prices of feed ingredients were mixed for the week but the total changes in all cases were small. Demand for most items continued to be mostly for current needs.

The trading in soybean oilmeal was more active this week with Illinois origin meal moving into the Southwest markets in good volume. Prices were up during the early part of the week as rains held back combining of beans, but the prices slipped back by the week end to be unchanged for the week.

There was a slightly better tone to the dehydrated alfalfa market as production slowed and minimized offerings of track supplies which have tended to hold the market down.

Cottonseed meal was about $2 lower as the weight of new crop supplies had its effect. Meat scraps were sharply lower but tankage was in short supply and prices held up.

Millfeeds lost part of their steam toward the end of the week. Prices, which had been stronger, based mostly on the unsettled labor situation in the Buffalo market, turned weaker and supplies of all millfeeds were plentiful.

FT. WORTH: Some pickup in demand for various feed ingredients was reported, but the general fall increase in demand has not materialized. The trend of prices was mixed.

Nearby shipment 44% soybean was $2 to $3 lower than previous week, but the deferred shipment was $1.50 to $2.50 higher.

Bulk bran and shorts were up $3; but the sacked products were only $1.50 higher.

Feather meal was off $5 as offerings increased. Old process cottonseed oil meal was still tight and prices unchanged, but offerings of solvent meal were increasing and quotations were $1.25 lower.

West

SEATTLE: There is no change in prompt soybean oil meal on the local ingredient market. New crop was also unchanged at $73.60.

Montana linseed meal is still off the market due to the flax acreage there being down 75%.

No. 2 yellow corn is unchanged at $52; the fast approaching new crop is up 50¢ to $51, due mainly to weather in the Midwest. New crop milo is also up 50¢ to $48.50.

PORTLAND: This week's feed ingredient trading featured sharply lower soybean meal quotes along with moderate price declines for animal protein feeds, cottonseed meal and some whole feeding grains.

Trading here and throughout the Pacific Northwest region was generally slow during the period when most purchases by mixers and feeders were still on a hand-to-mouth basis.

Soybean meal values slipped the largest amount noted any time this year when price tags were pared as much as $9 a ton. Cottonseed meal listings fell another $1 a ton during further adjustment towards a new crop basis.

Most animal protein feeds weakened as the reflection of a narrow demand and in sympathy with the big soybean meal price cut. Fish meal prices declined 5¢ per protein unit while meat and bone meal listing closed $2.50 a ton lower than one week ago.

Principal exception to the downward trend was wheat millfeed which sold firm to $1 a ton higher. Milo prices declined $2.50 a ton, barley and oats each slipped 50¢ a ton. Corn prices held unchanged and about steady.

Other Reports

ALFALFA MEAL: Dehydrated alfalfa production was greater in August of this year than in any August in the history of the alfalfa dehydrating industry, according to the American Dehydrators Assn., Kansas City. Also, August, 1961, production of 264,600 tons was 52,900 tons greater than the average of the past five years.

Inventories of dehy on Aug. 31 were reported at 526,300 tons, up 132,100 tons from the July 31 figure, indicating that about half of August's production went into storage. ADA noted that stocks on hand were 42,600 tons greater than a year earlier. The association also pointed out that disappearance of dehy during August —calculated from U.S. Department of Agriculture reports at 132,500 tons —was the highest ever experienced in the month.

Disappearance of dehy May through August set no record, but, at 489,300 tons, it exceeded use in any of the past five years and was 22,100 tons above the five-year average.

DEHYDRATED ALFALFA MEAL: A $2 advance in the price of dehydrated alfalfa was announced this week by larger producers to become effective Oct. 1, following a cold wave over much of the principal alfalfa territory, which heralded the end of the growing season.

FISH MEAL: Preliminary data for August shows that U.S. production of fish meal and solubles continues to stay ahead of the year-ago level.

The U.S. Bureau of Commercial Fisheries reports that January-August, 1961, production of fish meal totaled 221,489 tons, about 22% greater than the 180,152 tons recorded in the same months of 1960. Solubles production in the same months of this year amounted to 69,511 tons, up from the 63,014 tons produced January-August last year.

MOLASSES: Imports of industrial and feed molasses during July totaled 22.6 million gallons, according to a report from the U.S. Department of Agriculture. This is about 16% less than was imported in June and 55% less than in July, 1960, USDA indicated.

Cumulative imports in the first seven months of 1961 totaled 166.4 million gallons compared to 294.4 million during the same months last year. Principal sources of imports during July in millions of gallons were: Mexico 8.8, Dominican Republic 5.3, French West Indies 2.4, Indonesia 2.3 and Philippine Republic 1.02. Main points of entry of the imported molasses in millions of gallons were: New Orleans 6.5, Galveston 4.4, New York 2.7, Ohio 1.6, Georgia 1.3, Beaumont 1.2, San Francisco 1.2, Mobile 1.1 and Maryland 1.1.

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QUOTES

(Continued from page 98)

supply adequate; $42, unchanged.

St. Louis: Demand fair; trend steady; supply limited; yellow $39, $1.50 lower.

Los Angeles: Demand good; supply fair; trend steady; hominy meal $50, hominy pellets $52, both unchanged.

Chicago: Demand fair; trend steady; supply ample; $39.

Buffalo: Demand fair; trend steady to higher; supply fair to poor; $50.50, Boston, up $1.

Seattle: Demand fair; trend steady; supply limited; $51, delivered carlots, unchanged.

LINSEED OIL MEAL

Boston: Demand and supply fair; trend firm; 34% $72.70, up $1.

Ft. Worth: Demand slow; trend steady; supply moderate; 34% protein, extracted $71.20, October, down 50¢.

Cincinnati: Demand fair; trend lower; supply adequate; new process $49.50, down $6; old process $54.50, down $6; Minneapolis.

Los Angeles: Demand slow; trend steady; supply adequate; local production, 31% protein $71, unchanged.

Portland: Demand dull; supply adequate; trend unchanged; 34% solvent $87.10.

Chicago: Demand fair; trend 50¢@$1 lower; supply ample; Minneapolis basis: solvent $54.50, expeller $59.50.

Buffalo: Demand and supply fair; trend steady to higher; $54.50, Minneapolis, up 50¢.

Seattle: Demand fair; trend steady; supply limited; 34% protein (Montana) $89, delivered carloads, sacked, unchanged.

Minneapolis: Demand slow; supplies ample; price of 34% solvent off $1 to $54.

Denver: Demand fair; trend steady; supply ample; $68.50, down 50¢.

MEAT AND BONE MEAL

Memphis: Demand slow; trend easier; supply adequate; 50% protein $82, without billing; 50% protein $85, with rail transit.

Kansas City: Demand slow; trend weaker; supply ample; $90@92.50, down $5.

Boston: Demand and supply steady; trend steady; $1.20 a protein unit; converted 50% $82, both unchanged.

St. Louis: Demand fair; trend easy; supply ample; 50% $82, down $5.50.

Cincinnati: Demand good; trend steady; supply fair; 50% meat and bone scraps $80, Cincinnati, down $3.50.

Ft. Worth: Demand fair; trend steady; supply sufficient; meat and bone $85 bulk, $87.50 sacked, f.o.b. Ft. Worth, unchanged.

Los Angeles: Demand moderate; trend steady; supply limited; 50% protein $1.75 a unit, unchanged.

Chicago: Demand fair; trend $2.50 lower; supply adequate; 50% protein $92.50, sacked.

Portland: Demand fair; trend lower; supply adequate; 50% $82.50, sacked.

Buffalo: Demand and supply light; trend easier; 50% meat scraps $80, f.o.b. Buffalo, unchanged.

Seattle: Demand fair; trend steady; supply ample; $1.70 a unit protein, ex-processing plant, sacked, down 5¢.

St. Paul: Demand slow; supplies adequate; price dropped $4@5 to a level of $90@94.

Denver: Demand good; trend steady; supply fair; $85, unchanged.

MEXICAN PHOSPHATE

Brownsville, Texas: Mexican natural ground rock; 13% phosphorus $39 sacked, bulk $2 less.

MILLFEED

Minneapolis: Demand improved; supply adequate; prices were unchanged to $1.50 higher; sacked bran remained steady at $3a; sacked middlings gained $1 and is now $35; sacked red dog was up $1 to $40.

Kansas City: Demand slow; trend weaker; supply ample; sacked bran $34.50@35, up $1; sacked shorts $36@36.50, down 50¢; bulk bran $29@29.50, up 50¢; bulk shorts $32@32.50, up $2; bulk middlings $30.50@31, up $2.

Ft. Worth: Demand good; trend strong; offerings light for immediate; bran, bulk $39, burlaps $43; gray shorts, bulk $41.50, burlaps $46; middlings, bulk $41, delivered Texas common points; bulk bran and shorts up $3, sacked bran and shorts up $1.50, middlings up $3.50.

Chicago: Demand fair; trend steady to $1 up; supply ample; standard bran $34, standard midds. $35.50, red dog $38, nominal.

St. Louis: Demand fair; trend firm; supply ample; sacked bran $40.50, up $1.50; sacked shorts $42.50, up 75¢; bulk bran $34.50, up $1.50; bulk middlings $35.50, up $2.

Cincinnati: Demand fair; trend higher; supply adequate; bran $38, up $2.50; middlings $41, up $3.

Boston: Demand active; trend firmer; supply tight; bran $44.60, up $4.50; middlings $48.10, up $4.

Buffalo: Demand fair to good; supply poor; bran $38, nominal; middlings $39.50, nominal; red dog $41, nominal; all prices f.o.b. Buffalo.

Memphis: Demand fair; trend steady to lower; supply ample; wheat bran $37.80, up $2; gray shorts $39.80, up $2; standard midds. $38.80, up $3.

Denver: Demand good; trend steady; supply limited; shorts $40.75, up 50¢; bran $38.75, up $1; millrun $39.75, up $1.

Seattle: Demand fair; trend steady; supply good; $34, delivered common transit points, carlots, unchanged.

Portland: Demand slow; trend steady to firm; supply adequate; $33, sacked.

Los Angeles: Standard millrun $41@42, demand improved, trend firmer, offerings lighter, up $1; red bran $47@48, demand better, trend stronger, supplies light, up $2@3.

MILLFEED • FEED GRAIN
FEED INGREDIENTS
What Do You Need?
—Jerry Parks
633 Board of Trade
KANSAS CITY, MISSOURI

MOLASSES

Buffalo: Demand fair; trend steady; supply adequate; 16½¢ gal., f.o.b. Albany, unchanged.

Memphis: Demand fair; trend firm; supply ample; blackstrap 14¢ gal., tank car, f.o.b. New Orleans, unchanged; $30.17 ton, delivered Memphis, truck, down 42¢.

Kansas City: Demand slow; trend weaker; supply ample; 13¾¢ gal., New Orleans, down ¼¢.

Boston: Demand and supply steady; trend steady; 16½¢ gal., tank cars, unchanged.

St. Louis: Demand slow; trend steady; supply ample; blackstrap 14¢ gal., tank cars, New Orleans, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; 14¢ gal., New Orleans, down ¼¢.

Ft. Worth: Demand fair; trend steady; supply sufficient; blackstrap 14¼¢ gal., f.o.b. Houston; truck $31.07, delivered Ft. Worth, seller's market price on date of shipment, unchanged.

Los Angeles: Demand good; trend steady; supply ample; $25.50, f.o.b. tank cars; $25.75, f.o.b. tank trucks; both unchanged.

Minneapolis: Prices remain unchanged at $35 for blackstrap, tank truck, delivered; $31 for beet, $32 for blend.

Seattle: Demand fair; trend firm; supply good; $28.75, f.o.b. Seattle, tank truck lots, up $1.

Atlanta: Demand fair; trend steady; supply limited; citrus $20, f.o.b. Florida.

Denver: Demand fair; trend steady; supply ample; $33.70, tank car, unchanged.

OAT PRODUCTS

Buffalo: Demand fair to poor; trend steady to lower; supply fair; $24.60, sacked, Boston, off 50¢.

Chicago: Demand quiet; trend steady; supply adequate; reground oat feed $10; No. 1 fine ground feeding oatmeal $72; feeding rolled oats $73@75.

St. Louis: Demand fair; trend steady; supply ample; white pulverized $43, up 50¢; reground oat feed $11.50, down 50¢.

Cincinnati: Demand poor; trend steady; supply adequate; pulverized white oats $44@51, unchanged.

Boston: Demand good; trend steady to firm; supply adequate; white pulverized $57.75, sacked, unchanged; reground oat feed $24.10, sacked, up 60¢.

Kansas City: Demand fair; trend steady; supply ample; oat mill by-product $14@14.50, sacked, down $2; feeding rolled oats $74.50@75, up $1.50.

Ft. Worth: Demand slow; trend lower; supply sufficient; 10% protein oat millfeed $42, sacked, unchanged; reground $22.30, sacked, about unchanged.

Minneapolis: Demand sluggish; supplies adequate; sacked feeding rolled was off $3 to a range of $77@81; sacked feeding oatmeal was off $1 to a range of $66@73; sacked crimped was off $2 to $61; sacked pulverized was steady at $46.50@48; sacked oat feed was up $3 to $20.

Seattle: Demand fair; trend steady; supply good; 36 lb. or better $51, delivered truck lots, unchanged.

PEANUT OIL MEAL

Los Angeles: Nothing available.

Atlanta: Demand fair; trend steady; supply short; 45% $59, f.o.b. south Alabama.

POULTRY BY-PRODUCTS

Ft. Worth: Demand fair; trend lower; supply sufficient; $90@92.50, sacked, f.o.b. Texas plants, down $5.

Memphis: Demand slow; trend barely steady; supply adequate; 55% meal $86, sacked.

Boston: Demand good; trend steady to firm; supply tight; $100, nominal, unchanged.

Los Angeles: Demand excellent; trend steady; supply adequate; $1.55 a unit of protein, sacked, unchanged.

Atlanta: Demand fair; trend weaker; supply ample; meat meal $80, f.o.b. Alabama and Georgia producing points.

RICE BY-PRODUCTS

Buffalo: Demand good; trend steady; supply only fair; $56, f.o.b. Buffalo, unchanged.

Los Angeles: Demand slow; trend steady; supply very limited; California production, high fat content, bran $50, sacked, unchanged.

Ft. Worth: Demand fair; trend steady; supply increasing as mills get back into operation after hurricane; new crop rice bran $37, f.o.b. south Texas rice mills, sacked; hulls $2, unchanged.

Atlanta: Demand fair; trend steady; supply short; bran $44.50, sacked, delivered.

SCREENINGS

Chicago: Demand and supply fair; trend steady; ground grain $30, Canadian $22.50.

Buffalo: Demand and supply fair; trend steady; ground, sacked $32.25, New York, lake and rail, unchanged; bulk, unground $27.50, New York, unchanged.

Cincinnati: Demand fair; trend steady; supply adequate; unground grain screenings $18.75, down $2.50.

Los Angeles: Demand slow; trend steady; supply adequate; ground barley $35, sacked, unchanged.

Minneapolis: Demand continues slow; supply ample; unground Canadian up $1 to $18, due to higher replacement costs; domestic lights $3@10; domestic mediums $12@20; domestic heavies $30@28; 15% flax screenings $42.

SOFT PHOSPHATE

(Sacked, delivered)

Atlanta: $20.28.
Buffalo: $25.50.
Chicago: $24.96.
Cincinnati: $23.64.
Des Moines: $25.42.
Kansas City: $25.07.
Memphis: $22.28.
Minneapolis: $26.12.
Philadelphia: $24.51.
St. Louis: $24.32.

SOYBEAN OIL MEAL

Buffalo: Demand fair; trend steady to lower; supply fair to good; $47.50, Decatur, off $1.50.

Chicago: Demand slow; trend $1@2 lower; supply liberal; Decatur basis, 44% protein, unrestricted billing $52 and E.T.L. $47; 50% protein, unrestricted $57 and E.T.L. $52.50.

Portland: Demand dull; trend lower; supply ample; 44% $76.60, 50% $83.60.

St. Louis: Demand fair; trend easy; supply ample; 44% $54, Decatur basis, down $1.

Kansas City: Demand fair; trend steady; supply ample; 44% solvent process $52@52.50, Decatur, unchanged.

Memphis: Demand poor; trend weak; supply ample; prime 44% solvent $57, f.o.b. Memphis, down $1.50.

Atlanta: Demand fair; trend weak; supply good; 44% $59.70, delivered.

Minneapolis: Demand good; supply ample; 44% off $2.50 to $50, Decatur; 50% off $3.50 to $56; 41% expeller $56.

Seattle: Demand fair; trend steady; supply ample; $79.60, delivered, carlots, unchanged.

Denver: Demand fair; trend steady; supply ample; $65, down $5.

Ft. Worth: Demand good; trend steady; offerings light for immediate; 44% first half October $64.50@65.50, last half October $64@65, November-December $62.50@63.50; 50% first half October $70.50@71.50, last half October $70@71, November-December $68.50@69.50; 44% about $2@3 lower on nearby shipment but $1.50@2.50 higher on deferred; 50% about unchanged.

Boston: Demand slow; trend unsettled; supply plentiful; 44% $47.50, off $4; 50% $52.50, off $6; f.o.b. Decatur.

Cincinnati: Demand fair; trend steady to higher; supply adequate; $55@56, Decatur, down $2@3.

Los Angeles: Demand timid; trend much weaker; supply ample; $75@77.10, down $6.50@7.

TANKAGE

Chicago: Demand fair; trend firm; supply ample; 60% protein $100, sacked.

Kansas City: Demand fair; trend steady; supply tight; 60% digester $95@97.50, unchanged.

Cincinnati: Demand excellent; trend firm; supply short; 60% digester $90, Cincinnati, unchanged.

Ft. Worth: Demand fair; trend lower; supply sufficient; 60% digester $90, sacked, Ft. Worth, unchanged.

St. Paul: Demand slow; supply adequate; price off $6 to a range of $92@96.

UREA FEED COMPOUND

Woodstock, Tenn.: Minimum 42% nitrogen, 262% protein equivalent; $105 bagged, $99 bulk, delivered in all states east of and including New Mexico, Colorado, Wyoming and Montana.

LaPlatte, Neb., and South Point, Ohio: Minimum 42% nitrogen, 262% protein equivalent $95, f.o.b. bagged; $90, bulk, cars or trucks; freight equalized with nearest producing point.

Pryor, Okla.: Minimum 42% nitrogen, 262% protein equivalent $95 bagged, $91 bulk, f.o.b. Pryor, freight equalized with nearest producing point; $100 bagged, $96 bulk, delivered in cars or trucks to New Mexico, Colorado, Wyoming and all states to the East.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand good; trend lower; supply light; 5¢ lb., f.o.b. north central Texas, down ¼¢.

Los Angeles: Demand good; trend easier; supply adequate; 5⅝¢ lb., down ¼¢.

TURKEYS

(Continued from page 1)

on by a 26% bigger turkey crop this year than last, but it wouldn't surprise many people if the 1962 crop turns out to be even bigger than this year's. This opinion represents a fair share of the industry, despite the fact that many turkey operations are selling their birds for considerably less than it costs to grow them.

Hatch and Testings

Representatives of the industry in the camp which believes production is headed for more trouble in 1962 say, "Look at the poult hatch and breeder testings."

The U.S. Department of Agriculture has reported (Feedstuffs, Sept. 23, page 7) that current turkey poult production is showing a seasonal downturn — but still it rolls along ahead of last year.

An indicator of production trends even farther into the future is USDA's August turkey breeder test report (see page 4). The number of heavy breed turkeys tested during August of this year was 16% larger than in the same month last year.

It appears that a further big swing to heavy whites is in the wind. The poult hatch is led by heavy whites, and all of the increase in testings in August of this year compared with August of last year occurred in heavy white breeds.

It is said by some that the volume of breeders tested is really the key to what's ahead because once the birds that will supply hatching eggs are set to go, hatcheries, producers and processors seem to follow in step. This opinion is not held universally, however, for there are some turkey and feed men who say many things can happen between the time breeders are tested and turkeys are marketed.

The Poultry Survey Committee recently observed (Feedstuffs, Sept. 16, page 1) that it seems likely that turkey production in 1962 will equal or exceed current record levels. This group noted that this outlook probably is influenced by two generally satisfactory years preceding this year of low prices. The group also noted that there is evidence that ample production credit will be available.

These views are by no means universal, either.

It was reported this week that some growers who have been in the turkey business for a long time have had to cancel their poult orders because they can't get financing. Also, some hatcheries are reporting that they are noticing a slow-down in poult orders. A Minnesota hatchery was reported to have been forced by order cancellations to sell 35,000 turkey eggs for use in mink feeds.

It appears that there also is no straight line of thinking when it comes to opinions of whether the small or large turkey operation is in the best position in times of low prices.

Some observers say integrated operations, which may have breeder flocks and hatching as well as turkey growing units, aren't suffering as much as some growers. Any losses incurred in many of these situations are spread over more operations; losses in growing, for instance, may be covered by profits elsewhere.

A veteran turkey man believes that efficient and alert operators who are in the business to stay and are prepared for low as well as high prices have built-in protection against situations like those experienced this year.

On the other hand, however, some say the turkey grower who is small enough to alter his plans quickly will always be around because he doesn't have large amounts of capital invested in facilities and he can drop out of the business for a time if necessary.

Voluntary Cutbacks

Just how effective voluntary cutbacks can be is a matter of subjective appraisal. But it does appear that most operators will reduce production voluntarily only if they have some assurance that everybody else will, too. This approach is preferred over individual action, it seems.

The turkey industry is talking now about the results of a special meeting of feed manufacturers, growers, hatcherymen, processors and finance people called in Minneapolis, Sept. 14 by the Minnesota Turkey Growers Assn. (Feedstuffs, Sept. 16, page 1). Trade representatives who attended this meeting resolved that they will subscribe to and sign an "honor roll" pledging a minimum reduction of 20% in turkey production in 1962.

Not everyone has faith in this approach. Some say group efforts designed to accomplish a task such as cutting back turkey production voluntarily sometimes fail because growers and others in the industry who aren't a part of the group movement tend to increase production, hoping that their increases will be offset by decreases of the organized group's members.

Also, it has been observed that group action is limited because of the possibility that united efforts could be interpreted as "unfair restraint of trade."

Government Controls?

Some representatives of the turkey and feed industries believe government intervention is inevitable, whether it is wanted or not wanted.

"Unless marketing orders are used, I think we'll go the way of broilers," said an efficient grower who cut his usual placements in half this spring but still lost $5,900 on 16,000 birds.

The Iowa Turkey Federation, which has opposed price supports or government aid in the past, now is seeking marketing orders to permit control of the 1962 turkey crop (Feedstuffs, Sept. 16, page 4).

The Poultry Survey Committee, whose work is sponsored by the American Feed Manufacturers Assn., the National Turkey Federation and

the Poultry and Egg National Board, said in its latest quarterly report that it is probable that some type of turkey marketing order, as permitted by recent legislation, will be proposed. But it is not known whether such an order can be activated in time to affect the 1962 crop.

BULL

(Continued from page 1)

USDA announcement failed to specify in precise terms when tenders would be asked for the full amount, 400 million pounds, but the announcement did split the total into two amounts of 200 million pounds each, with delivery dates for the first half of the procurement which will start shortly.

Significantly, top USDA officials told this reporter that the USDA policy would be to buy oil "vigorously."

Previously these same officials informed Feedstuffs that USDA policy would be that which would assure to the soybean producers and those corn farmers who shifted from corn to beans that they would get the new price support level for beans at $2.30 bu. That obviously would mean that as long as the loan was available, they could put their crop into the loan program.

It is interesting to note, however, that in the September Demand and Price Situation report of USDA, it was stated as follows:

"Soybean farmers this year are expected to participate considerably more in the CCC price support program than they did last year. . . . Prices to farmers during most of the heavy harvesting season this fall probably will average at about the national average support rate of $2.30 bu. . . . Both crushing and exports of beans will be record large and probably require a good part of the increase provided by the 1961 crop. . . . But after all allowances will leave a carryout of approximately 65 million bushels."

Policy-makers at USDA talk like big gold bulls—uninteresting when it is also known that persons who prepared this report for the outlook committee had stated a price expectancy for beans during harvest at about 10¢ below the $2.30 loan level. This figure was corrected by editorial blue pencil in the front office.

Give or take either price level for beans during harvest, USDA has a tough job to get the country price of beans up to the price support level of $2.30 at harvest peak. They have 10 to 15¢ to go.

But one should not discount these tough cookies at USDA. They say in their announcement of the soy oil procurement program for foreign donation that "USDA will soon purchase 200 million pounds of vegetable oil products . . . deliveries to be made of this quantity during the period Nov. 15 through March 31, 1962. . . . Contracting for the remaining 200 million pounds will be completed before June 30, 1962."

This is nothing more than a vague airy statement. There is no flat statement that USDA may not telescope the last half of the 400-million-pound procurement into early winter and have USDA hold the oil for packaging and distribution call by the voluntary aid agencies which will handle the local distributions country by country later.

The USDA rulers are determined to make the oil donation program work. They are on the record to this effect, as for example the recent Horace Godfrey statement before the soybean processors meeting recently at Chicago, where he said USDA was determined to make the donation program work. As quoted above, a top official said that USDA would move vigorously to procure soy oil and also that USDA would back the soybean growers at the price support level this year.

This means only one thing—bullishness—to the extent that the loan program plus any USDA game in price manipulation can be accomplished.

This is not meant in any uncomplimentary way to the officials of USDA. They have the supply-management program—a well known fact, and they are no different from the Benson administration and will use every tool at their command to make the supply-management program operate. They are not hiding anything. They are advocating the best possible price of agricultural commodities for the farmer. They are tough. They are intelligent, and they are candid and honest. There is no bug under the chip at the top level of policy command at USDA.

The above statement does not necessarily mean that USDA would telescope its procurement of soy oil for the foreign donation program in a short period. Trade sources say that the 200-million-pound oil procurement program at this time will have a minor bullish effect on the market.

Would Be Major Factor

But they do note the vague comment that the additional 200-million-pound procurement to be completed not later than June 30 would be a major market factor. Indeed, one trade source told this reporter that if USDA wanted to bull the soybean market, it should lay off purchasing of oil until after the processors had accumulated about 75 million bushels of beans from the new crop harvest and then move aggressively to obtain the entire quantity of 400 million pounds of soy oil and hold it off the market for later withdrawals by the voluntary aid agencies.

That USDA is pushing for a bullish attitude is confirmed by reports from insiders in the USDA committee where it has been learned that the voluntary agencies were uncertain as to the quantity of oil they might handle in the donation program. The first formal announcement of USDA stated that a figure of between 350 and 500 million pounds could be handled by these charitable organizations. One source says that this statement is incorrect and that the aid agencies believed the 350-million-pound level was more realistic and that it would take them 12 months to attain that rate of distribution. This means that if the aid agencies will take 450 million pounds of oil this year under their carefully controlled distribution system, they can only build up to that total through a studied delivery call on USDA stocks.

With the bullish urge at USDA to return to the farmer the support price for beans, is it unreasonable to suppose that in its urgency USDA may find that if the 200-million-pounds procurement of soyoil does not bull the bean market, they may decide to go whole hog and buy and hold for delivery call the entire 400 million pounds, which exceeds the careful estimate of the voluntary aid agencies?

The USDA bulls — heaven knows they would shudder to be so identified—have acted also in the case of cotton oil when they announced this week that any cottonseed oil which may be acquired by CCC under the 1960 price support program will not be sold in commercial channels at less than the higher of the market price or 105% of the average investment cost calculated monthly for all CSO delivered to CCC. This policy will remain in effect through Sept. 30, 1962.

This can only mean that USDA is prepared to hold off the market such quantities of CSO which may be in excess of its peculiar demand and that CSO will not be dumped to influence the soy oil market price, which evidently USDA expects to buy up through donation or other accelerations which the government may effect on the soybean oil-meal complex.

The USDA bulls pulled all the stops on the organ later this week when they issued a plaintive plea to soybean farmers to consider the price support protection of the loan program at time of harvest. They cite the $2.30 loan level as a protection from price declines at time of harvest.

They add that while the crop is a record-breaker, the demand factors, export, meal and oil, continue high and are expected to be higher than in recent years. When commercial storage space for new crop beans is not available, USDA says that it will make available loans on farm facilities and that farmers may borrow from country ASC offices up to 95% of the outlay for farm storage facilities which should cost less than 40¢ per bushel to build.

USDA is so hotly bullish on the bean oil market that it might cause the Commodity Exchange Authority to investigate its promotional activities in this commodity market field.

Following is the official oil announcement:

"The U.S. Department of Agriculture has announced plans to purchase soon one half of the total quantity of 400 million pounds of vegetable oil products to be donated in 1962 to voluntary agencies for distribution among needy people in foreign countries. The Commodity Credit Corp. will call for deliveries of the initial 200 million pounds of vegetable oil during the period Nov. 15, 1961, through March 31, 1962.

"Contracting for the purchase of the remaining 200 million pounds will be completed before June 30, 1962."

5-10% GAIN IN SBOM OUTPUT LIKELY

WASHINGTON — Soybean meal production in 1961-62 may be 5-10% greater than in 1960-61, the U.S. Department of Agriculture says in its September feed situation report. The gain of 0.5 to 1 million tons expected would push 1961-62 output to 10-10.5 million tons.

Cottonseed meal production in the new feeding year is expected to be about the same as the 2.5 million tons estimated for 1960-61. And linseed meal output may not be much below the 375,000 tons estimated for 1960-61, USDA says.

FUTURE

(Continued from page 7)

farmers will prefer, and should, to be first a livestock producer and not a feed manufacturer."

Mr. Denis said these are the characteristics of the feed customer who will be feeding the bulk of the livestock and poultry of the future:

He will have a larger than average size operation or a small one rapidly increasing in size. He will be well-informed and frequently will have some college education. He will be younger than average (25-40). He will know his banker. He will travel extensively as part of his business. He will be a "hard-nosed" businessman-farmer and will be too concerned about making money to take the advice of anyone for granted. He will be a large and loyal customer as long as the feed manufacturer can make him money, but he will desert him when he can make more from someone else.

(The importance of identifying this customer was illustrated by Mr. Denis in referring to a survey conducted by one feed firm. It found it had 65% of the feed customers in a small area but only 12% of the feed business.)

"In the final analysis," Mr. Denis concluded, "there appears to be no all-encompassing appraisal of the technical service needs of farmers. At best it can be said that farmers will require the very minimum services necessary to enable the feed industry to serve its basic objective—that of providing proper and economic livestock nutrition.

"The degree of service required will vary greatly from farm to farm. It thus becomes a matter of determining the best fit for resources of the farm and the feed firm—both are partners in the livestock business."

BUSINESS AND MONEY MANAGEMENT PROBLEMS — "As part of a successful business community, you have a moral obligation to assist your customers to operate a profitable business today and in the future," Ben L. Hauenstein, vice president, Federal Intermediate Credit Bank, St. Paul, advised the marketing executives.

Mr. Hauenstein described how manufacturers should help dealers, feeders and farmer-feeders, suggesting that salesmen should be trained to carry out this assignment.

Dealers require help in four areas, accounting practices, credit management, assistance in sales and long-range planning. Some companies, he noted, provide a business management service for their dealers, including assistance in analyzing records. "These are of little value unless properly analyzed," he said.

The number one problem in the farm supply business is accounts receivable, resulting from increased size of farms, higher operating expenses and the narrower profit margin for agriculture. Mr. Hauenstein cited a new film strip developed by Nutrena Mills, Inc., as an excellent example of how dealers can be instructed on better credit management practices.

Long-range planning assistance for dealers should include maintenance of working capital at a satisfactory level, developing sales goals and adding facilities to improve service.

Mr. Hauenstein described the differences between two types of feed customers — the farmer-feeder, who produces much of his feed and uses supplements to balance his rations, and the feeder, who buys all the feed used in his operations. There is a marked difference in the business and money management practices of these two operators, he noted.

Sound Growth

He further illustrated these differences by describing examples of each. The successful farmer-feeder, who had a net worth of $16,600 in 1948 which grew to $252,290 by 1961, followed sound money management, planning and accounting procedures. This man is a customer capable of purchasing $25,000 to $30,000 worth of feed each year, and he will continue as a customer for some company for many years.

The feeder he described has had considerably less satisfactory experiences. A turkey grower, he fed 2,000 birds in 1940 and 60,000 in 1961. During this period his net worth increased from $5,150 to $40,000.

"This man just grew into the turkey business without any plan or direction," he said. "He expanded rapidly in recent years, but it was largely done on credit. He failed to maintain sufficient of his own working capital to carry him through an unfavorable season. Disease problems in 1960 resulted in a heavy carryover of debts and installments, which couldn't be met, and accounted for loss in net worth and reputation of being a good turkey grower; no plans or desire to improve business and money management practices.

"Insufficient records kept on income and expenses to file income tax return. No consideration given to developing records to assist in analyzing his business point out weaknesses in production or turkey program.

No Records Kept

"No records kept of family living costs. When bank balance was low, he took some of the proceeds from his turkey loan for family expenses. There was no effort made to keep living costs in line with the profitableness of his business. Family standard of living became geared to the most profitable years.

"This man had no long-range plans

Ben L. Hauenstein Dale Smith

for increasing the size of his operation or gaining in efficiency. He installed complete feed mixing equipment a few years ago in order to reduce his feed costs. To my knowledge, this equipment was never used. It was suggested in 1958, when he wanted to construct a large pole building, that he should accumulate some of his own cash to go into the operation. Instead, he took the profits from his operation and purchased a $7,500 automobile. The building was constructed on credit. Two or three years previous to this, he had purchased a $6,000 diamond for his wife.

"Because of the lack of good management and business practices, this agribusiness customer suffered heavy financial losses during 1960, when most growers made excellent profits. He was in financial difficulty because he was operating almost 100% on borrowed capital. I don't know what his operation will look like after 1961. It is undoubtedly a safe assumption that this man is on his way out of the turkey business. One of your companies will be losing a substantial feed account. Poor business and management practices have primarily contributed to the failure of this agribusiness customer."

The challenge faced by the feed industry, Mr. Hauenstein concluded, is to work with people who are successful today. "They are the ones who have the capabilities and the operations to be successful in the future. They are the ones worth the time and expense to work with in improving their operations."

END PRODUCT MARKETING PROBLEMS OF AGRIBUSINESS CUSTOMERS—Dale Smith, director of operations, Western Farmers Assn., Seattle, Wash., asked: "How can we properly train and motivate our sales and service personnel to give customers sound counsel and assistance in the important area of end product marketing?"

As a beginning to finding answers to this question, he said, "We must be sure that our own organization's basic policy does not encourage excessive farm production, which in turn contributes to glutted markets and loss prices of products. . . . Most of us are involved in this production race to some extent, and so are now obligated to reappraise our position and policies."

The ability of farmers to produce meat, eggs and milk has far outstripped the progress of marketing functions, Mr. Smith said. "We in the feed and supply industry must recognize our part in helping to create this situation, and also our responsibility and opportunity to help create a sounder future marketing climate for agricultural products. . . . Once we know our policy is tailored to current conditions in the area we serve, then we must fully advise our sales and service personnel of that policy—and even more important, the why of it. Only then will they be equipped to counsel and serve our farmer accounts."

Mr. Smith suggested these basic principles which each agribusiness producer must observe:

1. Produce for a specific market.

2. Produce to specific quality standards.

3. Utilize a stable marketing service.

It is the responsibility of persons and firms engaged directly or indirectly in both feed manufacturing and end product marketing to:

1. Encourage only production which will find a profitable market.

2. Assist only stable and capable agribusiness producers.

3. Provide technical guidance through qualified field personnel.

4. Provide products and services at a cost which will enable customers to maintain profitable production.

5. Assist in establishing a sound end product market which will provide reasonable returns to the producer.

MINNESOTA

(Continued from page 6)

FACTORS AFFECTING SHELL QUALITY—Dr. D. C. Snetsinger of Minnesota cited the existence of a vast number of factors affecting shell quality, which indicates there is no one cure-all for the problem of thin shells. At this time, an increase in dietary calcium appears to be the most practical way of decreasing the natural decline in shell quality.

Dr. Snetsinger said the consensus of most nutritionists studying calcium for hens is that levels of 2.75-3.00% in the cooler months and 3.25-3.75% in the warmer months are currently the most satisfactory.

Feed efficiency will be obviously reduced when higher calcium is substituted for corn, but there is no detrimental effect, except for levels in excess of 5%, on egg production.

PROTEIN REQUIREMENTS OF REPLACEMENT PULLETS—Reviewing Minnesota and other work on this subject, Dr. D. C. Snetsinger of Minnesota showed that pullets can be raised on a wide variety of rations, calorie-protein ratios and restricted feeding programs and still do well in the laying house. Further, it has been well demonstrated that pullets on high and medium energy rations can gain just as rapidly on low protein (12-13%) rations as on higher protein rations, with little if any detrimental effect on laying house performance.

Minnesota work is being done to study the absolute protein requirement and also to ascertain the feasibility of delaying sexual maturity by restricting protein intake.

It was shown that 12.5% protein is inadequate for optimum weight gains during the 10-15 week period, but this deficiency is overcome during the 15-20 week period. With the protein levels used in the Minnesota study, no differences attributable to treatment were observed for percent morality, sexual maturity and percent production during the first 75 days after housing. Birds receiving the lower protein diets consumed more total feed but less total protein. It thus becomes a matter of economics as to whether such low protein diets are feasible practically. Delay of sexual maturity by feeding high energy, low protein rations was not accomplished in 1960. Data for 1961 using even lower and higher protein and energy levels, respectively, are not yet available. Protein levels in the study reported ranged down to 12.5% and to 10.5% for the 15-20 week period in one group.

Commenting on restricted feeding and on protein requirement questions, Dr. Snetsinger observed that it may be beneficial not only to restrict energy but to accentuate the delay in sexual maturity by having a simultaneous protein deficiency. Florida researchers found that such a program delayed sexual maturity by about 10 additional days over adequate protein levels. An additional advantage of this approach is that the high quantities of feed consumed by pullets restricted by use of high-fiber diets are reduced.

Dr. Snetsinger said that lower protein rather than lower energy may be a good way to delay maturity.

RECENT RESEARCH ON ENERGY EVALUATION AND CONTROLLED FEEDING—Dr. Edwin P. Singsen of the University of Connecticut reviewed Connecticut and other work on metabolizable energy value of ingredients. He pointed out that metabolizable energy is a more widely useful measurement that can be determined much more precisely than productive energy.

Connecticut and Cornell reports plus a limited amount of current unpublished data from Connecticut have been assembled and averaged in Table 1. All data have been calculated on a uniform basis, assuming 10% moisture for all ingredients except corn (15%), molasses (20%) and whey (5%). Glucose, sucrose, fats and oils were all assumed to be moisture free.

Dr. Singsen, citing Connecticut data on ground yellow corn, said the value of 1460 calories per pound is a much more realistic figure to apply to ground corn, as used in practical feeds, than the higher Cornell value determined for the No. 2 quality product.

The value shown for tallow is based on the very young chick and may be expected to increase about 10% for chickens 8 weeks of age and older. Dr. Singsen also cited figures showing variations in values for certain ingredients. However, the averages in Table 1 are based on a sufficient number of samples so that they can be used with confidence in formulation and evaluation of practical feeds.

Discussing work on controlled feeding of heavy broiler-type breeding hens, Dr. Singsen told of use of a simplified system which Connecticut has now tested for two years. This is the "skip-a-day" program, which eliminates both weighing the birds and weighing the feed. All birds were full-fed a high energy all-mash ration from housing time until two weeks beyond peak egg production. The skip-a-day system was then initiated and during the first year consisted of withholding all feed for a 24-hour period, 8 a.m. one day to 8 a.m. the next, every third, fifth or seventh day. Full-fed birds served as controls, and all birds received one pound of wheat per 100 birds per day in the litter to help litter management. Withholding all feed for 24 hours every fifth or seventh day did not affect egg production or feed intake over a 32-week period, but skipping one day in three lowered egg production 5%. Average hatchability increased consistently in all groups on the skip-a-day system, approximating 74, 76, 79 and 80%, respectively, for birds that were full-fed, skipped one day in 7, one in 5 or one in 3 in the first experiment.

During the second experiment, full feeding was compared only with skipping every fifth day. Feed intake, body weight, mortality and egg production were not affected, while hatchability averaged 4.08% higher for the birds on the skip-a-day treatment.

TABLE 1. Metabolizable Energy Values of Feed Ingredients for Chickens* †

Ingredient	Av. metabolizable calories (per lb.)† Connecticut	Cornell	Combined average
Alfalfa meal (15%)	290	....	290
Alfalfa meal (18.5%)	490	620	555
Barley	1,130	1,280	1,205
Barley, pearled	....	1,130	1,130
Barley hulls	....	350	350
Bread meal	1,640	....	1,640
Corn cobs	....	240	240
Corn, No. 2 yellow	....	1,560	1,560
Corn, ground, yellow	1,445	....	1,445
Corn millfeed	....	1,470	1,470
Corn, gr. white degermod, debranned	1,630	....	1,630
Corn gluten meal	1,440	1,510	1,475
Corn oil	4,000	3,950	3,975
Dist. dried grains, corn	740	....	740
Dist. dried grains with sol., corn	1,110	....	1,110
Dist. dried solubles, corn	1,222	1,277	1,250
Fat, hydrolyzed animal & vegetable	....	3,230	....
Fat, poultry	3,723	....	3,723
Feather meal	1,078	....	1,078
Fermentation product, antibiotic	400	....	400
Fish meal, menhaden (59-64%)	1,161	1,307	1,234
Fish meal (60%) (19% fat)	1,576	....	1,576
Fish oils	....	3,660	3,660
Glucose	1,486	1,486	1,486
Hominy feed	1,380	1,350	1,365
Lard	....	3,980	....
Meat scrap (50-55%)	....	871	871
Meat and bone scrap (44%)	810	....	810
Milo, ground	1,530	1,480	1,505
Molasses, blackstrap	....	890	890
Oats, ground	1,140	1,190	1,165
Oats, hulless (Vicar)	....	1,540	1,540
Oat hulls	....	150	150
Oats, rolled	....	1,450	1,450
Poultry by-product meal	1,258	....	1,258
Rye (tetrapetkus)	....	1,300	1,300
Soybean hulls	....	5	5
Soybean oil meal (44%)	1,020	1,020	1,020
Soybean oil meal (50%)	1,090	1,150	1,120
Soybean millfeed low protein	....	350	350
Soybean millfeed high protein	....	570	570
Soybean oil, degummed	....	4,210	4,210
Soybean soapstock	....	3,150	3,150
Starch	1,680	....	1,680
Sucrose	1,670	....	1,670
Tallow, feed grade	3,190	3,230	3,210
Tallow, pure beef	....	2,860	2,860
Wheat, ground	1,320	1,490	1,405
Wheat, bran	....	510	510
Wheat, flour	1,390	....	1,390
Wheat, flour midds.	....	1,200	1,200
Wheat, red dog	....	1,240	1,240
Wheat, std. midds.	960	810	885
Whey, dried	906	830	868
Yeast, dr. brewers	840	....	840

*Combined average data were computed from a number of recent publications from Cornell University and the University of Connecticut. Potter et al., Storrs Agricultural Expt. Sta. Progress Report 39 (revised), 1961.

†All data calculated to an air-dry basis assuming 10% moisture for all ingredients, except corn (15%), molasses (20%) and whey (5%). Glucose, sucrose, fats and oils were assumed to be moisture free.

UTILIZATION OF FULL-FAT SOYBEANS—Reviewing Minnesota and other work on use of raw and full-fat processed soybeans in poultry rations, Dr. Paul Waibel of Minnesota indicated that the day may not be far off when full-fat soybean meal becomes a combination protein-energy source.

Dr. Waibel noted that research results indicate full-fat soybean meal can be used satisfactorily, although special processing must be carried out. A significant finding is that flaking of the soybeans prior to heating is an important step in complete release of the oil.

The more recent Cornell University suggestion that pelleting of the diet containing ground heated soybeans (without flaking) was effective in producing improved performance is an important observation and indicates that other processing possibilities besides flaking may be in order.

The final full-fat soybean product contains about 37% protein and 18% fat.

Dr. Waibel noted that a possible disadvantage of feeding full-fat soybeans is that carcass fat tends to become softer or unsaturated, according to Purdue studies. This may be a disadvantage so far as present carcass acceptability goes, but nutritionists are attempting to increase the amounts of unsaturated fatty acids in human diets. That could provide a compensating advantage.

DIETS FOR TURKEY BREEDERS—A paper by Dr. Paul Waibel and Dr. Elton Johnson of Minnesota reviewed literature and told of Minnesota research on turkey breeders. Dr. Waibel noted that Minnesota work has included research on unidentified factors, vitamin E and dietary antibiotics. In addition, energy requirements have been studied.

The results of the experiments reported, Dr. Waibel said, indicate that while a simplified corn-soybean meal type diet (without added vitamin E) supported egg production as well as more complex diets tested, it required unidentified factor supplementation for consistently high hatchability and vitamin E supplementation and possibly some component(s) in a trace mineral-vitamin mixture for consistently high progeny performance.

He said the control corn-soybean ration (supplemented with unidentified factor sources) could be modified to lower or higher energy levels without sacrificing performance.

Generally, according to Dr. Waibel, addition of dietary antibiotics did not influence performance significantly; however, in the most recent experiment, the combination of 16 gm. per ton erythromycin and 25 gm. per ton zinc bacitracin appeared to stimulate egg production. This finding, he said, requires further investigation.

MARKETS

(Continued from page 2)

department during the fall months.

Egg feed sales are going along at a steady pace. Despite reports of declining broiler feed tonnage in some other areas, mills in this territory have picked up some new accounts and are increasing their broiler feed sales.

Ohio Valley

The upward trend in demand for formula feeds continued this past week in the Ohio Valley feed mills as they gradually turn from lighter to heavier feeds.

There was still a small demand for turkey feeds. Cattle feed demand was on the rise as pastures deteriorated due to lack of moisture. Hog feed demand was considered good. Most mills were continuing their 40-hour work week.

Egg prices advanced another 2¢ from the previous week while poultry prices remained steady for the light demand.

Mountain States

Feed business in the Mountain States is pretty steady. Turkeys are now being marketed, but cattle are coming into the feedlots steadier than last year due to the heavy snows on the ranges.

Other feed volume for poultry and livestock is holding steady for this time of year.

Prices are generally steady to weaker.

Pacific Northwest

Formula feed movement followed a moderate pace throughout Oregon, Washington and Idaho this week.

Distributors at Portland reported that the demand for dairy rations appeared improved on a seasonal basis while the movement of most poultry feed classes lagged in the face of continued unfavorable producer paying prices for eggs, broilers and market-ready turkeys.

Portland frying chicken prices—which last week gained 2¢ lb.—this week yielded to trade pressure and slipped some 3¢ at the inside of the 13 to 19¢ range to rest at the season's lowest mark, basis f.o.b. Willamette Valley ranches.

The situation appeared somewhat brighter for egg producers with the outside price at Portland for ranch-fresh eggs advancing 1¢ doz., while the inside listing held firm and failed to reflect the 1¢ doz. increase across the board to retailers.

Northern California

Feed volume is reported to be holding steady as manufacturers maintain a normal five day week operation.

Demand for turkey and chicken feeds is still heavy. Some sources report that the feed business is over and above that which was experienced last year.

It is the feeling that the cooler weather being experienced in this area might be responsible for the increase.

Dairy feeds are rather dull as many herds continue to feed on pastures.

Cattle continue to be brought down from the mountain areas. This improves the volume of cattle feed although there is still feed left over in the fields following the harvesting of crops.

Southern California

Cooler temperatures prevailed throughout the week, stimulating feed demand. In Los Angeles small and medium egg prices increased 2¢ and 1¢, respectively, while in Fresno even large eggs increased 1 to 2¢ per dozen. Poultrymen feel better egg prices are in sight and that stronger market conditions will exist for the next 30-60 days.

Feed prices remained steady or slightly lower due to cheap milo and corn prices and the sliding protein market.

Most all the large broiler producers in this territory have decreased numbers substantially and feel they cannot lower production further without disrupting efficiency costs. Several ranchers who have already suffered sizeable losses say they feel they cannot afford to discontinue operations until a definite proposal or attitude is expressed by the federal government.

The turkey market has moved only in one direction—down. Hens currently are selling for 17½¢ lb. f.o.b. ranch, while toms are trading at 15½¢ to 16¢. After discussing present conditions with large turkey contracting companies or feed mills, it can be reported that a more conservative approach is being taken on replacement birds and contracts for next season.

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Louisiana Event Set

BATON ROUGE, LA.—Poultry Industries of Louisiana, an industry-wide group for the promotion of poultry production in Louisiana, will hold its annual convention at the Bellemont Motor Hotel in Baton Rouge Oct. 9-10, according to Miss Stella Jones of the Louisiana State University Agricultural Extension Service staff, executive secretary of the organization.

ICC Reschedules Railroad Hearing

ATLANTA, GA. — The Interstate Commerce Commission has announced a shift in plans for hearings on the Southern Railway System's proposal to cut rates on coarse grains from the Midwest into the Southeast. The Oct. 10 hearing, originally scheduled to be held in Atlanta, has been cancelled, and reset for Jan. 8 in Washington.

The Washington date was set at the request of the railroad.

There will be, however, a pre-hearing conference in Atlanta Oct. 10, conducted by M. L. Boat, hearing examiner, who will also conduct the Washington hearing.

Cincinnati Club to Meet

CINCINNATI, OHIO — Cincinnati Feed Club will hold its first meeting of the fall season Oct. 9 at the Greater Cincinnati Airport. A tour and inspection of the airport facilities will be followed by dinner in one of the airport's dining rooms. Harley Aylor of the John F. Young Co. is arrangements chairman.

GENERAL MILLS DIVIDEND

MINNEAPOLIS — The board of directors of General Mills, Inc., Minneapolis, has declared a dividend of 30¢ per share on General Mills common stock, payable Nov. 1 to stockholders of record Oct. 10. This is the 133rd consecutive quarterly dividend on General Mills common stock.

Arkansas Firm Drops Broiler Production

PINE BLUFF, ARK.—The Owens Poultry & Egg Co. at Pine Bluff has discontinued a contract broiler growing operation that had helped to supply the needs of its processing plant, according to Wayne Owens, owner.

Inaugurated last October, the program had included 300,000 birds grown within 25 miles of Pine Bluff. To supply feed for the broilers, Mr. Owens had constructed a small feed mill at the plant site. He says he will attempt to keep the mill open by obtaining feed business from layer flock operators, hog producers and dairymen in this region.

The firm owner say he plans to resume broiler production when the situation returns to "normal."

Firm Awards Prizes

KANSAS CITY — Leroy Johnson, Tri-State Milling Co., Rapid City, S.D., and Virgil Beckman, Moorman Mfg. Co., Quincy, Ill., were each awarded a transistor radio as exhibit booth registration prizes at the 1961 Feed Production School in Kansas City by Alloy Hardfacing & Engineering Co., Minneapolis.

INDIANA MILL BURNS

GOSHEN, IND. — An estimated $100,000 fire destroyed the Clinton Center Feed Mills six miles east of Goshen.

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